# Callan

**September 30, 2015** 

North Dakota State Investment Board Pension Funds

Investment Measurement Service Quarterly Review

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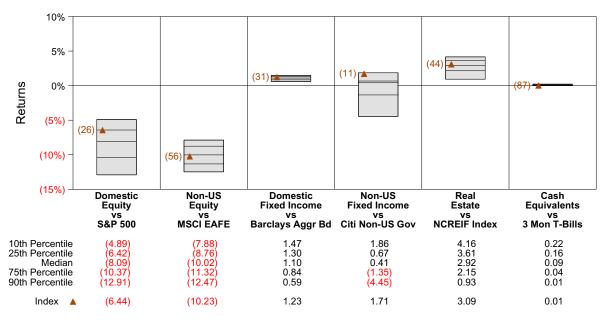
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# Market Overview Active Management vs Index Returns

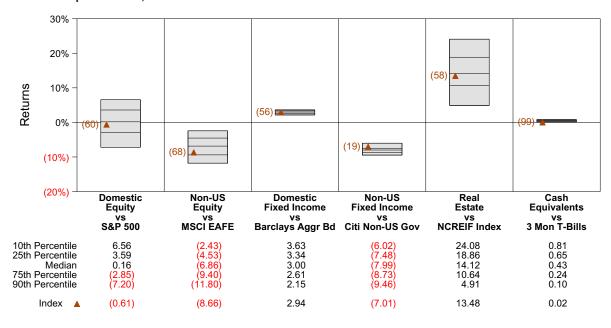
#### **Market Overview**

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the domestic equity manager database.

### Range of Separate Account Manager Returns by Asset Class One Quarter Ended September 30, 2015



### Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2015





# Callan





**Third Quarter 2015** 

### Made in China

#### ECONOMY

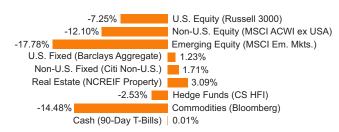
The global economic recovery lost momentum in the third quarter, shaken by the potential for crisis in China. The Fed backed away from raising interest rates in September, citing uncertainty in the capital markets and softening economic data.

# The Home Port is Safest in a Storm

#### **FUND SPONSOR**

Superior U.S. equity returns and a strong dol-PAGE lar have been the drivers of domestic dominance. Yet all fund types lagged, with differences partially explained by asset allocations: fixed income bolstered corporates, while poor alternative and hedge fund performance hurt E&Fs.

### **Broad Market Quarterly Returns**



Sources: Barclays, Bloomberg, Citigroup, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF. Russell Investment Group

### Nosedive

### U.S. EQUITY

The first negative quarter for U.S. equities since 2012 had a seemingly solid start, but took a nosedive in the second half. All capitalizations declined—the divergence between small and large cap was meaningful (Russell 2000: -11.92% and Russell 1000: -6.83%).

### **Stumbling Dragon**

### NON-U.S. EQUITY

Concerns over China's growth and falling commodity prices hammered non-U.S. equity returns into negative territory. The developed world (MSCI World ex USA: -10.57%) may have outperformed emerging markets (MSCI Emerging Markets: -17.78%), but still lost ground.

### **Longer to Liftoff**

### U.S. FIXED INCOME

The U.S. bond market reversed course with interest rates falling and Treasuries rising. Spread sectors generally underperformed as spreads widened. The yield curve flattened. The Barclays Aggregate gained 1.23%, but the Barclays Corporate High Yield slid 4.86%.

### **Red Scare**

### NON-U.S. FIXED INCOME

Global bond markets had mixed results in the third quarter. The developed market-focused Citi Non-U.S. WGBI Index finished at +1.71%. Emerging market sovereigns were plagued by risk aversion and negative currency effects (JPM EMBI Global Diversified: -1.71%).

### M&A, Here to Stay?

#### REAL ESTATE

The NCREIF Property Index advanced 3.09%, recording a 1.22% income return and a 1.87% appreciation return. The FTSE EPRA/NAREIT Developed REIT Index (USD) declined 1.42%; domestic REITs increased (FTSE NAREIT Equity REITs: 2.00%).

## Public Volatility, Private Slowdown

#### PRIVATE EQUITY

Public market volatility dampened private equity activity. Fundraising, new investment, and IPOs fell for both buyout and venture. The number of buyout transactions closed and venture M&A exits increased. This quarter's change is a sharp reversal from the ebullient second guarter.

### **Drag Me Down**

#### **HEDGE FUNDS**

After a modest rebound in the prior quarter, commodity prices led by oil resumed their secular decline. Representing actual hedge fund portfolios, the median manager in the Callan Hedge Fund-of-Funds Database slipped 3.30%, net of all fees.

### **Staying Afloat**

### **DEFINED CONTRIBUTION**

The average defined contribution plan managed to avoid losses in the second quarter of 2015—but just barely. Plan balances experienced a slight increase (+0.26%) driven primarily by participant inflows.

### Made in China

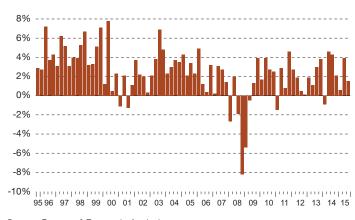
### **ECONOMY** | Jay Kloepfer

The global economic recovery lost momentum in the third quarter, shaken by the potential for crisis in China. Equity prices collapsed in China, and the Chinese government pulled out all the stops—including buying stock and cutting interest rates—to slow the decline, put a floor under the equity market, and calm fears. The stock market episode raised fears that the greater Chinese economy was in peril. Global financial markets were shocked, and equities fell sharply, while high-quality government bonds rallied. Emerging markets took an especially hard hit. Emerging economies typically have much closer ties to the Chinese economy than do Europe or the U.S., due in part to a heavy reliance on the commodities China consumes. Completing the triple whammy for emerging markets is the perceived vulnerability to a rise in U.S. interest rates, and concern surrounding U.S. monetary policy which reached a fever pitch as the summer began. The emerging market equity sell-off in July, August, and September was clearly Made in China. The fear that the Chinese economy may be on the edge of an abyss led to further concern that the Chinese government would embark on a round of competitive devaluation. Virtually all emerging currencies depreciated against the dollar—yet some developed currencies appreciated in expectation of a U.S. interest rate increase.

By the end of the quarter, markets had stabilized, and the worst fears about China did not materialize. However, the shock that rattled investors also rattled businesses and economic activity began to show signs of slowing following a strong second quarter. The Fed backed away from raising interest rates in September, citing uncertainty in the capital markets and softening economic data. Real GDP growth in the U.S. was revised up to 3.9% from 3.7% in the second quarter, fueled in part by continued strength in the job market, solid consumer spending, and what turned out to be an unsustainable run-up in inventories. GDP came in at 1.5%, pulled down largely by the reversal in inventories. GDP estimates softened as job market data began to unravel, first with substantial downward revisions in July and August, and then with a frankly disappointing gain of 142,000 in September. Until September, the U.S. job machine

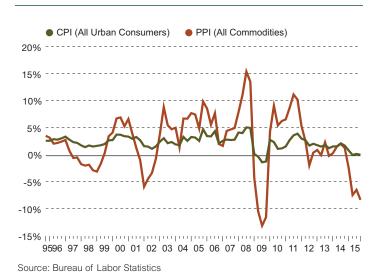
### **Quarterly Real GDP Growth**

(20 Years)



### Source: Bureau of Economic Analysis

### Inflation Year-Over-Year



was generating an average of 198,000 per month, compared to a robust 260,000 during 2014.

Oddly enough, the unemployment rate held constant at 5.1% during the quarter despite the slowdown in job creation, reaching the lowest rate since April 2008. The reason for the steady unemployment rate is another decline in the labor force; the participation rate is now down to 62.4%, the lowest rate since 1977! One piece of good news is that the broader "U-6" measure of unemployment, which includes people looking for work,

restricted to part-time, or discouraged from finding work, and becoming inactive, fell to 10% in September, down from 11.7% one year earlier. This "underemployment" rate peaked north of 16% in 2010. Focus remains on the unemployment rate since the Fed identified it as a potential trigger for raising interest rates. The 5.1% current rate is now well below the target identified by Fed Chair Janet Yellen, and in fact is at the level at which the Fed last began a cycle of raising interest rates in 2004. The reluctance to raise interest rates comes in part from the argument that the unemployment rate is low for the wrong reasons, i.e., labor force participation suppressed by economic weakness. The reluctance may also reflect hesitancy stemming from a lack of experience—it's been 11 years since the Fed last embarked on a cycle of raising interest rates! The last time the Fed began such a cycle, the iPhone did not exist, nor did Twitter or YouTube.

Second quarter consumer spending was revised up to 3.6% growth, and came in at 3.2% for the third quarter, clearly one sign of continuing economic strength. However, consumer data during the quarter were mixed. Falling gasoline prices enabled consumers to shift spending elsewhere, and fueled strong demand for cars and light trucks. Countering this good news, the disappointing jobs report in September combined with summertime market volatility dampened consumers' moods, and consumer sentiment dropped during each month of the quarter.

The dollar keeps climbing, as the U.S. remains the beacon of growth and stability in the turbulence of the global economy. The dollar has seen gains over the past year against both developed and emerging currencies, and against both major trading partners and "other important" trading partners. This currency appreciation, along with weak growth abroad and lower oil

The Long-Term View

	2015	Periods e	nded De	cember 3	31, 2014
Index	3rd Qtr	Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	-7.25	12.56	15.63	7.94	9.78
S&P 500	-6.44	13.69	15.45	7.67	9.62
Russell 2000	-11.92	4.89	15.55	7.77	9.75
Non-U.S. Equity					
MSCI EAFE	-10.23	-4.90	5.33	4.43	4.31
MSCI Emerging Markets	-17.78	-1.82	2.11	8.78	8.83
S&P Ex-U.S. Small Cap	-7.85	-3.42	8.52	6.84	5.48
Fixed Income					
Barclays Aggregate	1.23	5.97	4.45	4.71	6.49
90-Day T-Bill	0.01	0.03	0.09	1.54	3.24
Barclays Long G/C	2.18	19.31	9.81	7.36	8.49
Citi Non-U.S. Govt	1.71	-2.68	0.85	2.64	6.21
Real Estate					
NCREIF Property	3.09	11.82	12.13	8.38	7.61
FTSE NAREIT Equity	2.00	30.14	16.88	8.31	11.25
Alternatives					
CS Hedge Fund	-2.53	4.13	5.88	5.82	
Cambridge PE*		22.92	17.41	14.02	15.56
Bloomberg Commodity	-14.47	-17.01	-5.53	-1.86	
Gold Spot Price	-4.83	-1.51	1.55	10.45	4.38
Inflation – CPI-U	-0.29	0.76	1.69	2.12	2.52

<sup>\*</sup>Private equity data is time-weighted return for period ended December 31, 2014.

Sources: Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge

prices (which have sharply reduced U.S. exports of petroleum products), has pulled year-to-date exports down by almost \$1 trillion. While consumer spending remains strong even as confidence is tested by the reappearance of global market volatility, inventory reduction and net exports provided a serious drag to third-quarter GDP growth.

### **Recent Quarterly Indicators**

Economic Indicators	3Q15	2Q15	1Q15	4Q14	3Q14	2Q14	1Q14	4Q13
Employment Cost–Total Compensation Growth	2.0%	2.0%	2.6%	2.2%	2.2%	2.0%	1.8%	2.0%
Nonfarm Business–Productivity Growth	-0.2%*	3.3%	-1.1%	-2.2%	3.1%	2.8%	-3.5%	3.5%
GDP Growth	1.5%	3.9%	0.6%	2.1%	4.3%	4.6%	-0.9%	3.8%
Manufacturing Capacity Utilization	76.1%	75.9%	75.9%	76.2%	75.7%	75.1%	74.2%	74.2%
Consumer Sentiment Index (1966=100)	90.8	94.2	95.5	89.8	83.0	82.8	80.9	76.9

<sup>\*</sup>Estimate

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

## The Home Port is Safest in a Storm

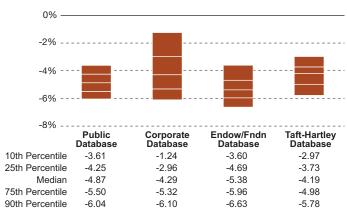
### FUND SPONSOR | Kevin Nagy

Equity markets were hammered by concern over China's slowing growth and falling commodity prices during the third quarter, while fixed income markets managed to remain positive despite the global turmoil. More sensitive to China, non-U.S. equity markets (MSCI ACWI ex USA Index: -12.10%) suffered more than its U.S. counterpart (Russell 3000 Index: -7.25%). U.S. and foreign fixed income stayed in the black, with foreign bonds slightly ahead (Barclays Aggregate: +1.23%, Citi Non-U.S. World Government Bond Index-Unhedged: +1.71%).

As seen in the Callan Fund Sponsor Quarterly Returns chart, all fund types lost ground. Taft-Hartley (-4.19%) and corporate (-4.29%) plans were the best performers at the median; endowments and foundations (-5.38%) were the worst. Dispersion was widest at the 10th percentile—corporate plans (-1.24%) fared noticeably better than public plans (-3.61%). The bottom decile featured the smallest dispersion: Taft-Hartley (-5.78%) plans suffered but endowment/foundations (-6.63%) were hardest hit.

Differences among the fund types can be partially explained by asset allocations. Taft-Hartley funds benefitted from less exposure to non-U.S. equity and larger real estate allocations

### Callan Fund Sponsor Returns for the Quarter



Source: Callan

versus other fund types. Endowment/foundations were negatively affected by small relative allocations to fixed income and high allocations to volatility-sensitive non-U.S. equity, alternatives, and fund-of-funds. Corporate plans' large U.S. fixed income allocations—perhaps due to liability-driven investments—helped post the best returns in the top quartile.

Taft-Hartley plans continue to be the top performers in the nearto mid-term (+0.76%, +7.49%, and +8.01% for the trailing one-, three-, and five-year time periods, respectively). Corporate

### Callan Database Median and Index Returns\* for Periods ended September 30, 2015

Fund Sponsor	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Public Database	-4.87	-2.54	-0.52	6.91	7.55	5.71
Corporate Database	-4.29	-2.91	-0.61	6.31	7.55	5.91
Endowments/Foundations Database	-5.38	-3.04	-1.84	6.43	7.03	5.56
Taft-Hartley Database	-4.19	-1.53	0.76	7.49	8.01	5.46
Diversified Manager	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Asset Allocator Style	-4.15	-3.12	0.39	7.02	7.84	5.99
U.S. Balanced Database	-5.84	-3.86	-1.82	7.24	8.06	5.64
Global Balanced Database	-5.77	-4.01	-2.91	4.37	5.46	5.44
60% Russell 3000 + 40% Barclays Agg	-3.86	-2.78	0.98	8.22	9.42	6.43
60% MSCI World + 40% Barclays Glbl Agg	-4.73	-4.41	-4.23	4.49	5.40	4.60

\*Returns less than one year are not annualized.

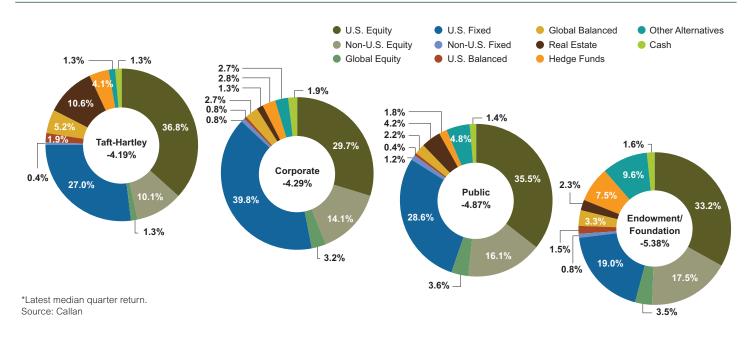
Sources: Callan, Barclays, MSCI, Russell Investment Group

#### **FUND SPONSOR** (Continued)

funds retained the lead in the 10-year period (+5.91%). Public funds (-2.54% year-to-date) struggled in the most recent quarter and trailed Taft-Hartley funds (-1.53% year-to-date). Poor hedge fund and other alternatives' performance contributed to endowment/foundations' poor showing across all time periods.

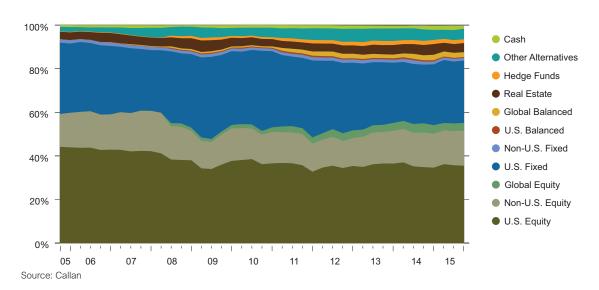
A 60% Russell 3000 + 40% Barclays Aggregate (-3.86%) Benchmark has outperformed the 60% MSCI World + 40% Barclays Global Aggregate Benchmark (-4.73%) in every time period shown going back for 15 years. Superior U.S. equity returns and a strong dollar have been the main drivers of U.S. vs. non-U.S. dominance. The story is similar among Callan's balanced manager database groups—the *Callan U.S. Balanced* group (-5.84%) outperformed the *Global Balanced* group (-5.77%) in every period except the most recent quarter.

### Callan Fund Sponsor Average Asset Allocation



### Callan Public Fund Database Average Asset Allocation

(10 Years)



### **Nosedive**

### U.S. EQUITY | Lauren Mathias, CFA

The first negative quarter for U.S. equities since 2012 had a seemingly solid start, but took a nosedive in August and September. Macroeconomic issues drove the sullen results, including China's weakening economy, the Fed's delay of interest rate increases, and commodity price declines. The U.S. economy is exhibiting some vigor—consumer confidence remained high and fueled spending; employment showed strength with record-low jobless claims; and housing appeared solid with new home sales at healthy levels. Energy prices impacted the environment negatively and positively—commodity-related companies felt pain while consumers felt wealthier.

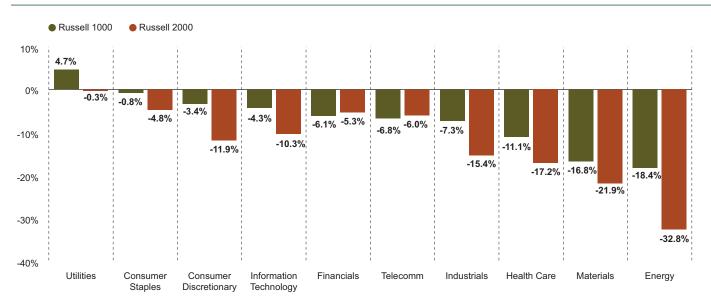
Underlying U.S. fundamentals were impacted by tough global markets. The strong U.S. dollar challenged domestic companies' ability to grow, negatively affecting earnings and expectations going forward. Volatility of stocks, as measured by the daily VIX, peaked for the year in August and remained elevated throughout the quarter. At the same time, stock correlations also increased to almost two times their long-term

average, making it more challenging for active managers to navigate the decline. Asset flows continued to show a preference for passive, which remains a sizable portion of U.S. equity assets under management.

Large and small cap stocks showed strong divergence in returns (Russell 2000 Index: -11.92% and Russell 1000 Index: -6.83%) while mid cap fell in between (Russell Midcap Index: -8.01%). Growth maintained its lead over value in most capitalizations, but small cap stocks were an exception (Russell 2000 Growth Index: -13.06% and Russell 2000 Value Index: -10.73%). Micro caps fared the worst (Russell Microcap Index: -13.77%).

Sector-wise, large cap Utilities alone escaped the shock, and Health Care, Materials, and Energy bore the brunt, particularly in small cap. The magnitude of Health Care underperformance was stronger in small cap due to biotechnology, resulting in small cap growth trailing value; the opposite was true in large

### **Economic Sector Quarterly Performance**



Source: Russell Investment Group

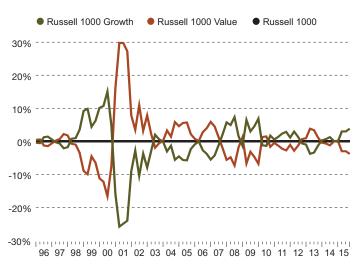
### U.S. EQUITY (Continued)

cap. In general, defensive areas of the market held up as investors shifted to a risk-off mentality. Commodity price declines and slow global growth were major factors behind Materials and Energy results. As is typical in high-volatility periods, large cap outperformed small and high quality beat low.

The U.S. equity market experienced an incredibly difficult quarter, but a few positive glimmers shone through: second-quarter GDP was revised up to 3.9%, consumer spending increased, and unemployment was at its lowest level since 2008. Though active management struggled versus the benchmarks, year-to-date results are favorable. The U.S. continues to be the best house in the global economy's neighborhood.

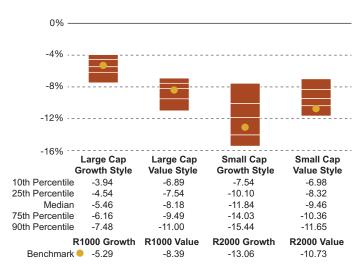
### **Rolling One-Year Relative Returns**

(vs. Russell 1000)



Source: Russell Investment Group

### **Callan Style Group Quarterly Returns**



Sources: Callan, Russell Investment Group

#### U.S. Equity Index Characteristics as of September 30, 2015

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Cap Range Min (\$mm)	1,163	8	175	175	8	8
Cap Range Max (\$bn)	629.01	635.44	635.44	26.32	13.44	5.03
Number of Issues	503	2,981	1,025	824	2,470	1,952
% of Russell 3000	79%	100%	92%	28%	18%	8%
Wtd Avg Mkt Cap (\$bn)	119.30	97.52	105.74	11.49	3.87	1.78
Price/Book Ratio	2.5	2.4	2.5	2.3	2.0	1.9
Forward P/E Ratio	15.1	15.7	15.5	17.1	17.4	18.1
Dividend Yield	2.3%	2.2%	2.2%	1.9%	1.7%	1.6%
5-Yr Earnings (forecasted)	10.6%	11.3%	11.1%	11.9%	12.6%	13.7%

Sources: Russell Investment Group, Standard & Poor's

### U.S. EQUITY (Continued)

### Callan Style Median and Index Returns\* for Periods ended September 30, 2015

Large Cap Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Large Cap Core Style	-6.80	-4.93	-0.30	12.96	13.59	7.34
Large Cap Growth Style	-5.46	-1.12	3.94	13.76	13.91	8.17
Large Cap Value Style	-8.18	-7.89	-3.76	12.29	12.63	6.65
Aggressive Growth Style	-6.60	-0.72	4.11	13.80	13.16	8.65
Contrarian Style	-8.77	-8.50	-4.60	11.97	12.20	6.20
Yield-Oriented Style	-7.96	-9.32	-5.04	9.97	11.56	6.70
Russell 3000	-7.25	-5.45	-0.49	12.53	13.28	6.92
Russell 1000	-6.83	-5.24	-0.61	12.66	13.42	6.95
Russell 1000 Growth	-5.29	-1.54	3.17	13.61	14.47	8.09
Russell 1000 Value	-8.39	-8.96	-4.42	11.59	12.29	5.71
S&P Composite 1500	-6.69	-5.23	-0.30	12.43	13.30	6.93
S&P 500	-6.44	-5.29	-0.61	12.40	13.34	6.80
NYSE	-8.74	-7.88	-6.17	8.77	10.59	6.04
Dow Jones Industrials	-6.98	-6.95	-2.11	9.26	11.38	7.17
Mid Cap Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Mid Cap Core Style	-6.99	-2.54	1.73	14.72	14.56	8.64
Mid Cap Growth Style	-8.28	-2.58	2.79	13.38	13.21	8.77
Mid Cap Value Style	-8.49	-6.13	-0.63	13.86	13.26	8.31
Russell Midcap	-8.01	-5.84	-0.25	13.91	13.40	7.87
S&P MidCap 400	-8.50	-4.66	1.40	13.12	12.93	8.25
Small Cap Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Small Cap Core Style	-10.08	-4.39	3.61	13.92	14.36	7.90
Small Cap Growth Style	-11.84	-3.91	4.15	12.74	13.94	8.19
Small Cap Value Style	-9.46	-6.22	1.68	12.65	13.06	7.69
Russell 2000	-11.92	-7.73	1.25	11.02	11.73	6.55
S&P SmallCap 600	-9.27	-5.49	3.81	13.02	14.04	7.65
NASDAQ	-7.09	-1.61	4.00	15.54	15.72	9.10
Smid Cap Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Smid Cap Broad Style	-10.48	-4.30	1.89	13.10	13.52	8.62
Smid Cap Growth Style	-10.98	-2.54	2.08	13.03	13.97	8.63
Smid Cap Value Style	-9.96	-6.34	0.36	12.43	12.31	8.15
Russell 2500	-10.30	-5.98	0.38	12.39	12.69	7.40
S&P 1000	-8.73	-4.90	2.12	13.11	13.28	8.05
Russell 3000 Sectors	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Consumer Discretionary	-4.17	1.68	10.68	18.19	18.63	9.68
Consumer Staples	-0.92	-1.34	6.97	12.88	14.41	10.37
Energy	-18.99	-22.33	-32.51	-5.01	2.94	2.26
Financials	-6.04	-5.66	1.71	14.52	11.57	0.68
Health Care	-11.64	-1.52	6.91	20.49	19.54	10.40
Industrials	-8.08	-10.05	-3.78	13.33	12.51	7.23
Information Technology	-4.77	-2.98	2.26	12.57	13.82	8.68
Materials	-17.26	-17.24	-17.89	4.00	6.68	6.98
Telecommunications	-6.77	-3.45	-7.22	2.40	8.51	6.54
Utilities	4.20	-6.82	5.28	9.88	11.04	6.72

<sup>\*</sup>Returns less than one year are not annualized.

Sources: Callan, Dow Jones & Company, Russell Investment Group, Standard & Poor's, The NASDAQ Stock Market

# **Stumbling Dragon**

### NON-U.S. EQUITY | Kevin Nagy

Non-U.S. markets were pummeled in the third quarter (MSCI ACWI ex USA Index: -12.10%), as concerns over China's growth convinced many investors to take a risk-off approach. Fears about China's slowdown came to a head in August when Chinese monetary authorities unexpectedly devalued the renminbi. Attempts to dampen the ensuing volatility were not enough to prevent knock-on effects spreading throughout the world.

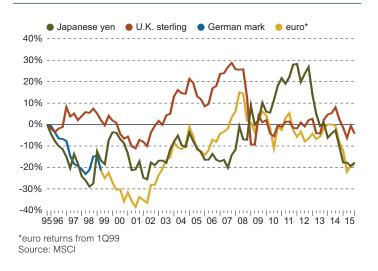
The pain was felt by both developed (MSCI World ex USA Index: -10.57%) and emerging markets (MSCI Emerging Markets Index: -17.78%). Value lagged growth as the MSCI ACWI ex USA Growth (-10.73%) bested the MSCI ACWI ex USA Value (-13.50%). Small cap stocks rode the wave of volatility better than large cap due to less exposure to Energy, but were still deep in the red (MSCI ACWI ex USA Small Cap Index: -10.02%). In developed countries defensive sectors fared best, with Consumer Staples (-1.49%), Utilities (-4.23%), and Health Care (-5.26%) providing the most protection. Materials (-19.67%) and Energy (-16.83%), bludgeoned by falling commodity prices, were the worst performers.

European stocks regressed (MSCI Europe Index: -8.69%) as hand wringing over a possible "Grexit" abated only to be replaced by turmoil in China. Denmark (-2.41%) did best, due primarily to strong domestic performance from Consumer Discretionary (+8.54%). Nearby Norway was crippled by falling oil prices and posted the largest loss (-19.13%). European sectors mirrored the story in the rest of the developed world, with Energy and Materials (-15.80% and -19.91%, respectively) suffering the biggest losses.

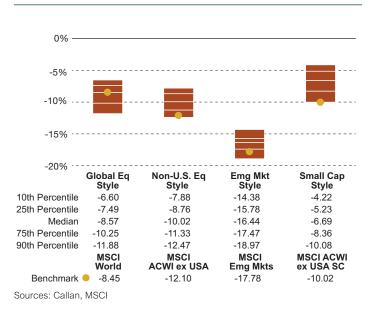
Southeast Asia and the Pacific (MSCI Pacific ex Japan Index: -15.97%) trailed Europe and rest of the world. Singapore (-19.48%), Hong Kong (-16.16%), and Australia (-15.33%) felt the full force of China's volatility. Australian Energy firms were hit hard by falling oil prices and sagging demand in China. Japan's economy shrunk by 1.2% on an annualized basis

### **Major Currencies' Cumulative Returns**

(vs. U.S. Dollar)



### **Callan Style Group Quarterly Returns**



in the second quarter and inflation remained well below the Bank of Japan's two percent target (MSCI Japan: -11.80%). Japanese carmakers were hurt by reports of slowing sales in China; a massive explosion at the port of Tianjin in August temporarily shut down Toyota's largest Chinese production facility. Energy and Materials were laggard sectors in the Index

#### NON-U.S. EQUITY (Continued)

(-28.24% and -19.35%, respectively). Financials (-17.73%) followed as Japanese banks were battered by large losses in their equity portfolios.

Emerging markets were hit hardest in this broad downturn, with the MSCI Emerging Markets Index dropping 17.78%. China was the main story for much of the quarter after a surprise devaluation of the renminbi in August sparked fears that the slowdown in growth was worse than expected. China's central bank tried to curb the ensuing market turbulence by cutting interest rates. but met limited success. Specific to China, only the Telecomm (-9.20%) sector avoided double-digit losses; Energy (-31.19%), Materials (-27.11%), and Financials (-26.92%) all lost more than a quarter of their value. The ripple effects were felt throughout Asia: Indonesia (-24.19%), Malaysia (-18.23%), and Thailand (-17.51%) all declined sharply. A strong devaluation of local currencies contributed to the general slowdown, as the Malaysian ringgit and Indonesian rupiah both fell to their lowest levels versus the dollar in more than 15 years. Emerging countries outside of Asia were also affected by the strengthening U.S. dollar and

**Quarterly Return Attribution for EAFE** 

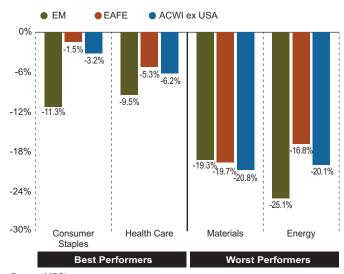
(U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	-15.33%	-7.33%	-8.63%	6.42%
Austria	-8.99%	-9.16%	0.18%	0.18%
Belgium	-7.85%	-8.02%	0.18%	1.33%
Denmark	-2.41%	-2.59%	0.18%	1.83%
Finland	-5.54%	-5.71%	0.18%	0.87%
France	-6.45%	-6.62%	0.18%	10.07%
Germany	-10.89%	-11.05%	0.18%	8.85%
Hong Kong	-16.16%	-16.18%	0.03%	3.02%
Ireland	-3.16%	-3.34%	0.18%	0.40%
Israel	-5.55%	-1.73%	-3.89%	0.63%
Italy	-4.36%	-4.53%	0.18%	2.57%
Japan	-11.80%	-13.68%	2.17%	22.52%
Netherlands	-8.90%	-9.07%	0.18%	2.80%
New Zealand	-7.06%	-1.74%	-5.41%	0.14%
Norway	-19.13%	-12.32%	-7.77%	0.58%
Portugal	-11.55%	-11.71%	0.18%	0.15%
Singapore	-19.48%	-15.06%	-5.30%	1.27%
Spain	-11.12%	-11.28%	0.18%	3.45%
Sweden	-9.16%	-8.18%	-1.07%	2.95%
Switzerland	-6.97%	-2.73%	-4.35%	9.68%
U.K.	-10.02%	-6.58%	-3.68%	20.30%

Sources: MSCI, Russell Investment Group, Standard & Poor's.

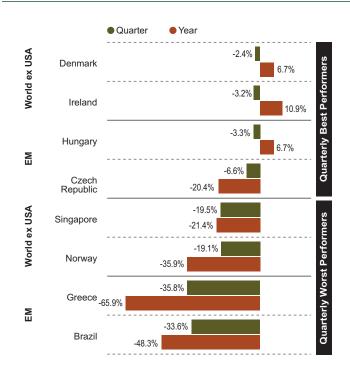
falling commodity prices. Brazilian equities lost over 30% (MSCI Brazil: -33.56%) amid a corruption scandal involving the staterun energy company Petrobras, a 22% devaluation of the real, and a downgrade of the country's credit rating to below investment grade by Standard & Poor's.

### **Quarterly Returns: Strong and Struggling Sectors**



Source: MSCI

### **Quarterly and Annual Country Performance Snapshot**



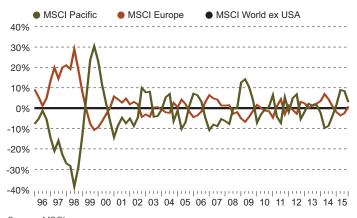
Source: MSCI

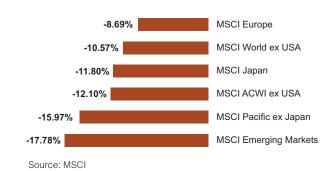
### **Rolling One-year Relative Returns**

(vs. MSCI World ex USA)

### **Regional Quarterly Performance**

(U.S. Dollar)





Source: MSCI

### Style Median and Index Returns\* for Periods ended September 30, 2015

Non-U.S. Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Non-U.S. Equity Style	-10.02	-4.05	-6.86	6.31	5.02	4.24
MSCI EAFE	-10.23	-5.28	-8.66	5.63	3.98	2.97
MSCI EAFE (local)	-8.98	-0.95	0.80	12.71	7.71	3.30
MSCI ACWI ex USA	-12.10	-8.28	-11.78	2.78	2.27	3.49
MSCI ACWI ex USA Growth	-10.73	-5.67	-7.79	3.99	3.08	3.99
MSCI ACWI ex USA Value	-13.50	-10.93	-15.72	1.53	1.42	2.94
Global Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Global Equity Style	-8.57	-5.01	-3.51	9.59	8.87	5.85
MSCI World	-8.45	-6.04	-5.09	8.58	8.29	4.73
MSCI World (local)	-7.72	-3.90	-0.78	11.86	10.00	4.77
MSCI ACWI	-9.34	-6.65	-6.16	7.52	7.39	5.14
Regional Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
MSCI Europe	-8.69	-5.20	-9.33	6.03	4.28	3.31
MSCI Europe (local)	-6.99	-0.25	-0.25	10.09	6.91	3.88
MSCI Japan	-11.80	0.21	-2.22	8.96	4.91	1.14
MSCI Japan (local)	-13.68	0.10	6.76	25.81	12.75	1.70
MSCI Pacific ex Japan	-15.97	-15.48	-16.77	-2.00	0.87	5.15
MSCI Pacific ex Japan (local)	-10.74	-6.50	-3.68	6.87	4.99	5.32
Emerging/Frontier Markets	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Emerging Market Style	-16.44	-14.62	-17.72	-3.58	-2.56	5.29
MSCI Emerging Markets	-17.78	-15.22	-18.98	-4.93	-3.25	4.60
MSCI Emerging Markets (local)	-11.97	-6.86	-6.79	2.45	2.09	6.91
MSCI Frontier Markets	-10.57	-13.39	-24.19	6.28	2.16	-1.96
Non-U.S. Small Cap Equity	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Non-U.S. Small Cap Style	-6.69	3.39	1.29	11.71	9.47	6.87
MSCI World ex USA Small Cap	-8.03	-0.34	-3.71	7.48	5.74	4.23
MSCI ACWI ex USA Small Cap	-10.02	-2.54	-6.42	5.51	3.85	5.11
MSCI Emerging Market Small Cap	-16.67	-9.80	-15.23	-1.09	-2.43	6.79

<sup>\*</sup>Returns less than one year are not annualized.

Sources: Callan, MSCI

# A Little Longer to Liftoff

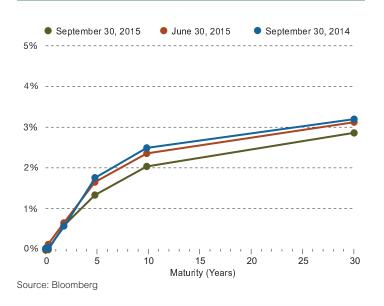
### U.S. FIXED INCOME | Kevin Machiz, CFA, FRM

Interest rates moved lower in the third quarter amid a broadbased flight to quality—apprehension over China's economy and commodity prices appeared to be the primary sources of concern. The yield curve flattened significantly as yield spreads widened across non-Treasury sectors and the **Barclays Aggregate Index** rose 1.23%.

The U.S. economy expanded at a moderate pace with the support of fixed investment by businesses, household spending, and the jobs market. Inflation nevertheless remained below the Fed's two percent target.

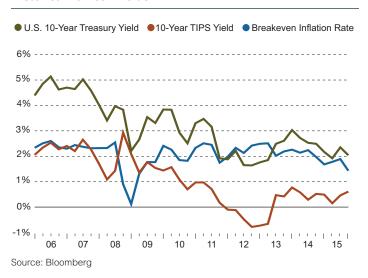
While many market participants previously pointed to the Fed's September meeting as a likely date for interest rate hikes, the Fed once again pegged the federal funds and discount rates at 0.00%–0.25% and 0.75%, respectively. The Fed cited global economic and financial developments as concerns. The Fed mentioned, and Chair Yellen reiterated in a subsequent speech, that market-based measures of inflation expectations had declined.

### **U.S. Treasury Yield Curves**

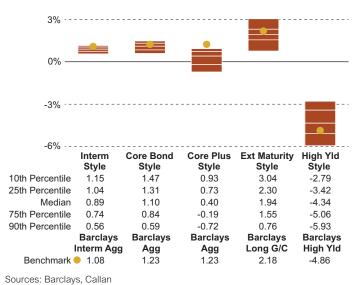


The 10-year U.S. Treasury yield decreased 32 bps. Yields on longer-term bonds decreased by a similar amount. The market's expectation for the first hike in the fed funds rate was pushed back to March 2016. The breakeven inflation rate (the difference between nominal and real yields) on the 10-year Treasury decreased significantly (47 bps) to 1.43%, as Treasury Inflation-Protected Securities underperformed nominal Treasuries.

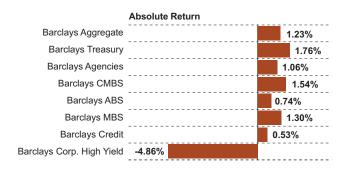
### **Historical 10-Year Yields**



### **Callan Style Group Quarterly Returns**



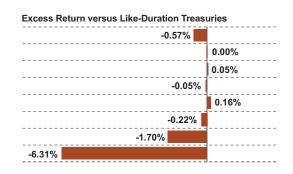
### **Fixed Income Index Quarterly Returns**



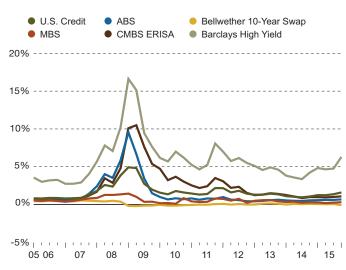
Source: Barclays

Non-Treasury sectors broadly underperformed like-duration Treasuries. Credit was among the worst as Financials, Industrials, and Utilities lagged by 0.30%, 2.14%, and 1.01% respectively. Within Industrials, Energy and Metals & Mining companies were hit hardest, trailing like-duration Treasuries by 4.97% and 9.45%, respectively. Mortgage-backed securities (MBS) (-0.22%) and Commercial MBS (-0.05%) also struggled. Asset-backed securities beat like-duration Treasuries by 0.16%.

High yield corporate bonds also performed poorly. The Barclays Corporate High Yield Index ended in the red (-4.86%). New issue activity is on pace with the previous three calendar years. Year-to-date, there was approximately \$224 billion in new issuance of high yield bonds, down from \$246 billion over the same period in 2014.



#### **Effective Yield Over Treasuries**



Source: Barclays

U.S. Fixed Income Index Characteristics as of September 30, 2015

Barclays Indices	Yield to Worst	<b>Mod Adj Duration</b>	Avg Maturity	% of Barclays G/C	% of Barclays Agg
Barclays Aggregate	2.31	5.60	7.86		100.00%
Barclays Govt/Credit	2.19	6.22	8.45	100.00%	69.12%
Intermediate	1.69	3.97	4.31	79.20%	54.74%
Long-Term	4.09	14.77	24.22	20.80%	14.38%
Barclays Govt	1.36	5.65	6.92	57.08%	39.46%
Barclays Credit	3.29	6.98	10.49	42.92%	29.66%
Barclays MBS	2.61	4.20	6.69		28.36%
Barclays ABS	1.47	2.42	2.58		0.57%
Barclays CMBS	2.45	4.82	5.39		1.89%
Barclays Corp High Yield	8.04	4.39	6.25		

Source: Barclays

### U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns\* for Periods ended September 30, 2015

Broad Fixed Income	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Core Bond Style	1.10	1.29	3.00	2.05	3.61	5.10
Core Bond Plus Style	0.40	0.70	2.19	2.38	4.22	5.48
Barclays Aggregate	1.23	1.13	2.94	1.71	3.10	4.64
Barclays Govt/Credit	1.20	0.90	2.73	1.59	3.09	4.61
Barclays Govt	1.71	1.79	3.68	1.30	2.47	4.27
Barclays Credit	0.53	-0.26	1.50	2.02	4.09	5.28
Citi Broad Investment Grade	1.12	1.06	2.85	1.67	3.06	4.72
Long-Term	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Extended Maturity Style	1.94	-2.59	2.85	2.70	6.50	7.13
Barclays Long Govt/Credit	2.18	-2.39	3.09	2.17	5.96	6.65
Barclays Long Govt	4.97	0.22	8.62	2.78	6.18	6.92
Barclays Long Credit	0.52	-3.93	-0.03	1.87	5.84	6.35
Citi Pension Discount Curve	3.23	-3.77	4.15	2.22	8.08	7.85
Intermediate-Term	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Intermediate Style	0.89	1.73	2.70	1.65	2.78	4.66
Barclays Intermediate Aggregate	1.08	1.73	2.95	1.64	2.69	4.37
Barclays Intermediate Govt/Credit	0.95	1.77	2.68	1.45	2.42	4.17
Barclays Intermediate Govt	1.21	2.03	3.00	1.10	1.88	3.85
Barclays Intermediate Credit	0.54	1.36	2.17	2.09	3.47	4.91
Short-Term	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Defensive Style	0.34	1.14	1.39	1.05	1.45	3.14
Active Duration Style	1.11	1.52	2.71	1.73	3.05	4.72
Money Market Funds (net of fees)	0.00	0.01	0.01	0.01	0.01	1.25
ML Treasury 1–3-Year	0.31	0.98	1.16	0.67	0.76	2.54
90-Day Treasury Bills	0.01	0.02	0.02	0.06	0.08	1.33
High Yield	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
High Yield Style	-4.34	-1.48	-2.07	4.12	6.47	7.30
Barclays Corporate High Yield	-4.86	-2.45	-3.43	3.51	6.15	7.25
ML High Yield Master	-4.88	-2.51	-3.54	3.42	5.90	7.04
Mortgage/Asset-Backed	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Mortgage Style	1.26	1.92	3.68	2.39	3.55	5.00
Barclays MBS	1.30	1.61	3.43	1.98	3.03	4.71
Barclays ABS	0.74	1.83	2.38	1.21	2.12	3.41
Barclays CMBS	1.54	2.24	3.72	2.52	4.54	5.39
Municipal	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Barclays Muni	1.65	1.77	3.16	2.88	4.14	4.64
Barclays Muni 1–10-Year	1.32	1.64	2.22	2.07	3.00	4.05
Barclays Muni 3-Year	0.80	1.19	1.07	1.24	1.66	3.04
TIPS	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Barclays TIPS Full Duration	4.45	0.00	0.00	4.00	0.55	4.04
	-1.15	-0.80	-0.83	-1.83	2.55	4.01

<sup>\*</sup>Returns of less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch

## **Red Scare**

### NON-U.S. FIXED INCOME | Kyle Fekete

Developed sovereign bonds performed well relative to U.S. bonds as interest rates fell due to mounting concerns over a slowing global economy. The Citi Non-U.S. World Government Bond Index earned 1.71% for the quarter, but is down 4.22% year-to-date. Hedged in U.S. dollars, the Index is up 1.97%, outperforming the unhedged investors primarily due to broad-based weakness against the U.S. dollar. The "safe-haven" German bund gained nearly 2% with the yield finishing at 0.58%. Energyrelated currency weakness in Canada and Australia translated into disappointing returns on an unhedged basis (both down 6%). The Canadian economy shrank for two straight quarters officially a recession. Italy was the best performer in the Index, expanding more than 4% on both a hedged and unhedged basis.

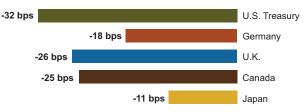
In August, China's surprise change in exchange-rate policy heightened risk aversion and piled onto the already strong headwinds facing emerging market bonds. Slowing demand from China, falling commodity prices, capital outflows, and worries over a Fed hike all contributed to poor performance. The JPM EMBI Global Diversified Index slipped by 1.71%. Emerging market currencies were particularly hard hit, as the local currency-denominated JPM GBI-EM Global Diversified Index sank 10.54%—the worst quarterly performance since late 2011.

The emerging Americas exhibited the highest increase in yields. Brazil, suffering from the sharp drop in oil prices, as well as fiscal and political challenges, was downgraded by S&P to junk

#### 10-Year Global Government Bond Yields



### Change in 10-Year Yields from 2Q15 to 3Q15



Source: Bloomberg

### Quarterly Return Attribution for Non-U.S. Gov't Indices (U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	-6.19%	2.68%	-8.63%	1.93%
Austria	1.88%	1.70%	0.18%	1.82%
Belgium	2.48%	2.30%	0.18%	2.96%
Canada	-5.93%	1.02%	-6.88%	2.32%
Denmark	1.95%	1.77%	0.18%	0.81%
Finland	1.70%	1.51%	0.18%	0.71%
France	2.13%	1.94%	0.18%	11.55%
Germany	1.96%	1.77%	0.18%	8.92%
Ireland	2.71%	2.52%	0.18%	0.95%
Italy	4.31%	4.11%	0.18%	11.39%
Japan	3.06%	0.87%	2.17%	33.06%
Malaysia	-14.57%	-0.47%	-14.17%	0.50%
Mexico	-6.04%	1.48%	-7.41%	1.16%
Netherlands	1.90%	1.71%	0.18%	2.96%
Norway	-5.71%	2.23%	-7.77%	0.33%
Poland	1.09%	2.21%	-1.10%	0.68%
Singapore	-4.34%	1.02%	-5.30%	0.41%
South Africa	-11.43%	0.89%	-12.22%	0.56%
Spain	3.01%	2.82%	0.18%	6.42%
Sweden	0.45%	1.54%	-1.07%	0.54%
Switzerland	-3.68%	0.71%	-4.35%	0.35%
U.K.	-0.49%	3.32%	-3.68%	9.72%
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Source: Citigroup

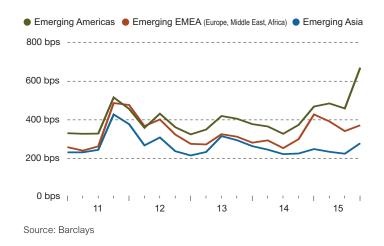
### NON-U.S. FIXED INCOME (Continued)

status; the country has seen its currency decline by roughly 40% over the past year. Brazil (-9.97%) was the most notable underperformer in the dollar-denominated Global Diversified Index. Ukraine surged +50.18% following an agreement with creditors whereby bondholders would take a 20% haircut in return for a portion of future GDP growth, subject to a set formula. Among

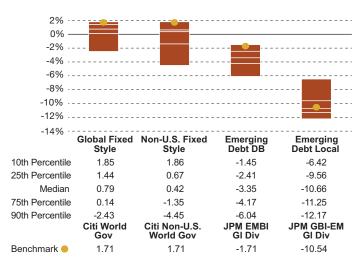
local currency bonds, pain was widespread. Brazil (-24.66%), Colombia (-18.05%), Turkey (-14.76%), Malaysia (-14.48%), Indonesia (-14.15%), and Russia (-13.19%), all suffered double-digit declines. The yield on the GBI-EM Global Diversified Index was 7% as of quarter end, with Brazil at 15% and Russia and Turkey both over 10%.

### **Emerging Spreads Over Developed**





### **Callan Style Group Quarterly Returns**



Sources: Callan, Citigroup, JPMorgan Chase

### Callan Style Median and Index Returns\* for Periods ended September 30, 2015

Global Fixed Income	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Global Style	0.79	-2.30	-3.40	-1.53	1.15	4.32
Citi World Govt	1.71	-2.38	-3.83	-2.85	-0.19	3.37
Citi World Govt (Local)	1.89	1.27	4.01	3.52	3.51	3.77
Barclays Global Aggregate	0.85	-2.25	-3.26	-1.59	0.81	3.71
Non-U.S. Fixed	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Non-U.S. Style	0.42	-5.24	-7.99	-3.54	0.18	3.58
Citi Non-U.S. World Govt	1.71	-4.22	-7.01	-4.59	-1.32	2.92
Citi Non-U.S. World Govt (Local)	1.97	1.04	4.13	4.44	3.95	3.69
European Fixed	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Citi Euro Govt Bond	2.74	-6.67	-8.12	1.52	1.11	3.76
Citi Euro Govt Bond (Local)	2.55	1.18	3.98	5.80	4.89	4.37
<b>Emerging Markets Fixed</b>	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
JPM EMBI Global Diversified	-1.71	-0.07	-0.62	1.50	4.73	6.89
JPM GBI-EM Global Diversified	-10.54	-14.91	-19.77	-8.72	-3.56	4.45

\*Returns less than one year are not annualized. Sources: Callan, Citigroup, JPMorgan Chase

# M&A, Here to Stay?

### REAL ESTATE | Mike Pritts

The NCREIF Property Index advanced 3.09%, recording a 1.22% income return and 1.87% appreciation return. The Index's cash flow return was 0.68% (3.22% for the trailing four quarters). There were 204 asset trades, representing \$7.8 billion of overall transactional volume. This remains ahead of the \$5.0 billion 10-year quarterly transactional average. The peak volume over the prior 10-year period was \$8.7 billion in the second quarter of 2007.

Pricing cooled slightly from the recent capitalization-rate compression trend as equal-weighted transactional capitalization rates increased to 5.91%. This reflects a slight expansion from the second quarter's low. Over the prior cycle, quarterly equalweighted transactional capitalization rates dipped to a low of 5.46% in the fourth guarter of 2007 and expanded to a peak of 8.46% in the third quarter of 2009. Appraisal capitalization rates decreased from 4.81% to 4.67%. Over the prior cycle, these rates declined to a low of 4.89% (in the third guarter of 2008).

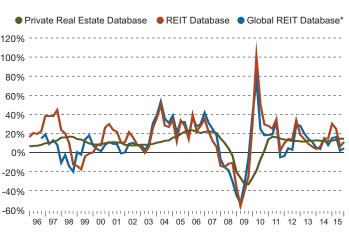
On a preliminary basis, the NCREIF Open End Diversified Core Equity Index produced a 3.68% total return, comprising a 1.16% income return and a 2.51% appreciation return. In the listed real estate market, the FTSE EPRA/NAREIT Developed REITs Index (USD) declined 1.42% and U.S. REITs tracked by the FTSE NAREIT Equity REITs Index increased 2.00%.

In the U.S., sectors were mixed and markets volatile. By sector, Self-Storage (+16.14%) led, followed by Residential (+6.94%), Industrial (+5.00%), Malls (+4.12%), and Health Care (+2.41%); Office (-1.24%), and Lodging (-13.73%) dipped. U.S. REITs raised \$8.6 billion following the completion of eight secondary offerings raising \$1.7 billion, one preferred equity offering raising \$288 million, and 15 unsecured debt offerings raising \$6.7 billion. There were no U.S. REIT IPOs; the quarter had the lowest amount of capital raised by the REIT market since Q4 2011 and the fifth lowest quarterly capital raise since the beginning

of 2009. In large part, 2015 has been dominated by significant M&A activity among a number of large real estate investors driven by inexpensive financing and significant amounts of capital seeking real estate. Notable among the recent deal activity is Blackstone's announced offer to acquire Strategic Hotels and BioMed Realty Trust and, more recently, the announced merger of Starwood Waypoint and Colony American. In the U.S., M&A activity through the third quarter of this year has already exceeded all of 2014.

U.S. REIT indices continued their slide up until the mid-September FOMC meeting where the decision was made not to increase the discount rate. With updated clarity on near-term Fed moves, REIT markets began to appreciate toward the end of the third guarter and into the fourth. Listed real estate beat broad equity markets. A combination of both U.S. economic outperformance and a low interest rate environment continues to make U.S. commercial property an attractive destination for both U.S. and non-U.S. investors. Capital flows have created a \$9 billion investment queue for open-ended core funds as well as a healthy \$74 billion invested in U.S. commercial real estate over the last 12 months.

### **Rolling One-Year Returns**



\*Global REIT returns from 3Q96

Source: Callan

#### **REAL ESTATE** (Continued)

In European core markets, investment activity is returning to crisis countries. Yet the threat of deflation remains given falling global commodity prices and the decline in the euro versus the U.S. dollar. Prime yields in core markets are at very low levels ranging from 2.5% in London to 4.5% in Madrid. Transaction volumes increased as a result of accelerating cross-border global investment into Europe. There is a significant dispersion in prime office rental rates across Europe ranging from €200 (per square meter) in Barcelona, €500 in Paris, all the way up to €1,500 in London's West End.

Asian real estate markets continued to face macro headwinds stemming from contracting industrial activity and slowing export

demand. Despite the pressures, low office vacancy rates within major Asian cities remained the dominant theme. Office buildings in Hong Kong were affected by the lack of new supply and excess demand, pushing rental rates upwards. Tokyo showed improvements in terms of office occupancy rates and accelerating rental growth rates, giving rise to increased pricing power for landlords.

CMBS issuance reached \$23.1 billion, a pull back from the \$27.4 billion issuance volume from the second quarter of 2015 and \$28.1 billion in the third quarter of 2014. Total issuance for the trailing 12 months was \$102.8 billion, a reduction from the recent peak at the end of the second quarter of 2015.

### **NCREIF Transaction and Appraisal Capitalization Rates**



Source: NCREIF

Note: Transaction capitalization rate is equal-weighted.

### **NCREIF Capitalization Rates by Property Type**



Source: NCREIF

Note: Capitalization rates are appraisal-based.

### Callan Database Median and Index Returns\* for Periods ended September 30, 2015

Private Real Estate	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Real Estate Database (net of fees)	2.92	10.24	14.12	13.06	13.70	5.55
NCREIF Property	3.09	10.18	13.54	11.92	12.56	8.02
NFI-ODCE (value wtd. net)	3.58	10.67	14.02	12.44	12.98	5.74
Public Real Estate	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
REIT Database	2.63	-2.94	11.38	10.10	12.89	7.88
FTSE NAREIT Equity	2.00	-3.79	9.88	9.59	12.00	6.82
Global Real Estate	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Global REIT Database	-0.73	-3.00	5.16	8.18	9.08	6.38
FTSE EPRA/NAREIT Developed REIT	-1.42	-4.16	3.58	7.05	8.33	5.42

\*Returns less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

# **Public Volatility Private Slowdown**

### PRIVATE EQUITY | Gary Robertson

In fundraising, Private Equity Analyst reports that new commitments totaled \$53.7 billion with 179 new partnerships formed, down 38% from the second quarter's \$87.1 billion and 231 partnerships formed. With the slowing of commitments and uncertainty caused by the quarter's volatile public stock market, 2015's fundraising will likely be in the vicinity of last year's \$266 million.

According to Buyouts Insider, the investment pace by funds into companies totaled 406 transactions, up from 358 deals in the second quarter. The announced aggregate dollar volume fell to \$11.4 billion (from \$24.3 billion). Only one deal with an announced value of more than \$1 billion closed during the guarter, Carlyle-owned CommScope's \$3.1 billion add-on acquisition of Broadband Network Solutions.

According to the National Venture Capital Association, investments in venture capital companies totaled \$16.3 billion in 1,070 rounds of financing. The dollar volume and number of rounds both dropped compared to the second quarter's \$17.5 billion and 1,189 rounds. The largest funding was a \$1.0 billion expansion "mega-round" raised by Social Finance.

Regarding exits, Buyouts reports that 123 private M&A exits of buyout-backed companies occurred during the quarter, with 37 deals disclosing values of \$25.5 billion. Both the M&A exit count and announced value was down from the second guarter's 135

### Funds Closed January 1 to September 30, 2015

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	225	26,726	14%
Buyouts	212	129,821	66%
Subordinated Debt	27	8,038	4%
Distressed Debt	32	18,511	9%
Secondary and Other	14	6,385	3%
Fund-of-funds	47	7,496	4%
Totals	557	196,976	100%

Source: Private Equity Analyst

private exits and disclosed value of \$35.8 billion. Buyout-backed IPOs dropped precipitously to four issues floating \$660 million, down from 17 IPOs totaling \$6.6 billion in the second quarter.

Venture-backed M&A exits totaled 90 transactions, with 20 disclosing a dollar volume of \$5.1 billion. The number of exits and disclosed value both increased from the second guarter's 74 sales valued at \$3.7 billion. VC-backed IPOs fell, with 13 offerings raising a combined \$1.7 billion versus the second quarter's 29 IPOs and total issuance of \$3.8 billion.

Please see our upcoming issue of Private Markets Trends for additional in-depth coverage.

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of Capital Market Review and other Callan publications.

### Private Equity Performance Database (%)

(Pooled Horizon IRRs through March 31, 2015\*)

3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
3.9	22.4	18.6	17.2	10.9	3.8	27.7
3.1	10.8	13.0	13.6	12.8	9.7	14.8
1.3	7.7	13.3	14.3	12.6	10.9	13.1
-0.1	7.1	10.9	11.2	10.8	7.2	10.0
1.6	5.7	12.2	11.4	10.3	11.0	11.3
2.0	10.1	13.9	14.2	12.0	8.9	14.4
1.0	12.7	16.1	14.5	8.0	4.2	9.4
	3.9 3.1 1.3 -0.1 1.6 2.0	3.9 22.4 3.1 10.8 1.3 7.7 -0.1 7.1 1.6 5.7 2.0 10.1	3.9     22.4     18.6       3.1     10.8     13.0       1.3     7.7     13.3       -0.1     7.1     10.9       1.6     5.7     12.2       2.0     10.1     13.9	3.9     22.4     18.6     17.2       3.1     10.8     13.0     13.6       1.3     7.7     13.3     14.3       -0.1     7.1     10.9     11.2       1.6     5.7     12.2     11.4       2.0     10.1     13.9     14.2	3.9     22.4     18.6     17.2     10.9       3.1     10.8     13.0     13.6     12.8       1.3     7.7     13.3     14.3     12.6       -0.1     7.1     10.9     11.2     10.8       1.6     5.7     12.2     11.4     10.3       2.0     10.1     13.9     14.2     12.0	3.9     22.4     18.6     17.2     10.9     3.8       3.1     10.8     13.0     13.6     12.8     9.7       1.3     7.7     13.3     14.3     12.6     10.9       -0.1     7.1     10.9     11.2     10.8     7.2       1.6     5.7     12.2     11.4     10.3     11.0       2.0     10.1     13.9     14.2     12.0     8.9

Private equity returns are net of fees. Sources: Standard & Poor's, Thomson/Cambridge \*Most recent data available at time of publication

# **Drag Me Down**

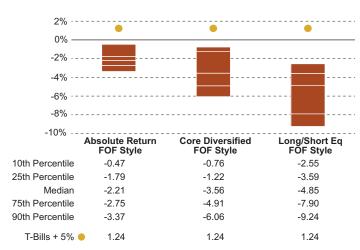
### **HEDGE FUNDS | Jim McKee**

The third quarter was a flood of red ink for capital markets. After a modest rebound in the prior quarter, commodity prices (led by oil) resumed their secular decline, as the **Bloomberg Commodity Index** nosedived 14.48%. Lacking evidence of a global economy on solid ground, equity markets panicked. High yield spreads widened significantly while Treasurys gained during the quarter's flight to quality. Amid this backdrop of anemic global growth, the Federal Reserve balked on raising short-term rates.

As a raw measure of unmanaged hedge fund interests, the **Credit Suisse Hedge Fund Index** (CS HFI) dropped 2.53%. Representing actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** slipped 3.30%, net of all fees.

Within the CS HFI, the biggest strategy loser was *Event-Driven Multi-Strategy* (-6.92%). *Distressed* fell 3.52%, but **Barclays High Yield Credit** (-4.86%) dropped further. The average fund in *Long/Short Equity* performed well during the quarter, losing only 1.54% while long-only benchmarks, like the **S&P 500 Index** (-6.44%), fell much more. Relatively free of beta's downside risk, *Equity Market Neutral* rose 2.15%.

### **Callan Style Group Quarterly Returns**



Sources: Callan, Merrill Lynch

Within Callan's Hedge Fund-of-Funds Database, market exposures notably affected performance in the quarter. Hurt badly by the falling stock market, the median *Callan Long/Short Equity FOF* (-4.85%) lagged the Callan Absolute Return FOF (-2.21%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* fell 3.56%.

Callan Database Median and Index Returns\* for Periods ended September 30, 2015

	Quarter	3 Quarters	Year	3 Years	5 Years	10 Years
Hedge Fund-of-Funds Database	-3.30	-0.72	0.05	5.28	4.29	4.11
CS Hedge Fund Index	-2.53	-0.59	0.11	5.01	4.53	5.16
CS Equity Market Neutral	2.15	1.73	2.07	3.46	2.99	-1.19
CS Convertible Arbitrage	-1.52	1.40	-1.66	2.50	3.53	4.52
CS Fixed Income Arbitrage	-0.19	0.56	0.60	3.59	5.35	3.86
CS Multi-Strategy	0.08	3.32	4.49	7.80	7.52	6.34
CS Distressed	-3.52	-3.61	-5.84	5.78	5.09	5.35
CS Risk Arbitrage	-2.72	-0.39	-2.10	1.63	1.15	3.54
CS Event-Driven Multi-Strategy	-6.92	-4.23	-6.23	4.85	3.01	5.30
CS Long/Short Equity	-1.54	1.94	4.24	8.95	6.13	5.91
CS Dedicated Short Bias	17.40	6.97	4.28	-9.88	-11.10	-8.56
CS Global Macro	-2.95	-0.44	0.02	2.74	4.35	6.92
CS Managed Futures	4.37	0.12	11.40	3.84	2.51	4.27
CS Emerging Markets	-5.57	-2.93	-2.19	3.66	2.67	5.09

<sup>\*</sup>Returns less than one year are not annualized. Sources: Callan, Credit Suisse

# **Staying Afloat**

### **DEFINED CONTRIBUTION | Tom Szkwarla**

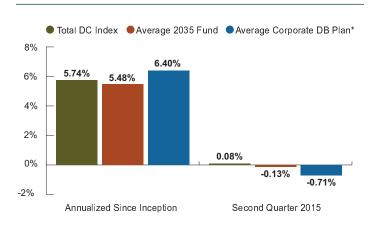
The average defined contribution (DC) plan managed to avoid losses in the second quarter of 2015—but just barely. According to the Callan DC Index™, the typical DC plan ended June 30, 2015, with a 0.08% gain. This placed DC plans on firmer ground than the typical 2035 target date fund (TDF) or corporate defined benefit (DB) plan, which lost 0.13% and 0.71%, respectively.

Plan balances experienced a slight increase (+0.26%) driven primarily by participant inflows. Inflows (i.e., participant and plan sponsor contributions) added 0.18% to total growth, while market appreciation (return-derived growth) contributed the remaining 0.08%. Since inception, plan sponsor and participant contributions have had a significant impact on balances. Thirty percent of total growth in balances (2.49% annualized) has been attributable to such net flows since the Index's 2006 inception.

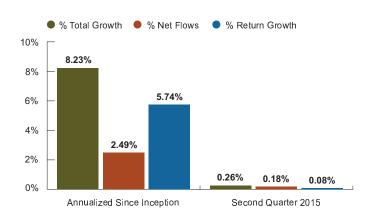
In the first quarter of 2015, TDFs beat out U.S. large cap equity to become the largest holding in the typical DC plan—and their dominance continued to grow in the second quarter. Target date funds accounted for the majority of inflow activity, capturing 70 cents of every dollar moving. Since 2011, TDF cash inflows have averaged just over 70% each quarter, with the highest inflow clocking in at 89% in the second quarter of 2014.

The Callan DC Index™ is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.

### **Investment Performance\***



#### **Growth Sources\***



# Net Cash Flow Analysis (Second Quarter 2015)\*

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	70.45%
Non-U.S. Equity	13.11%
Company Stock	-27.86%
U.S. Large Cap	-49.44%
Total Turnover**	0.32%

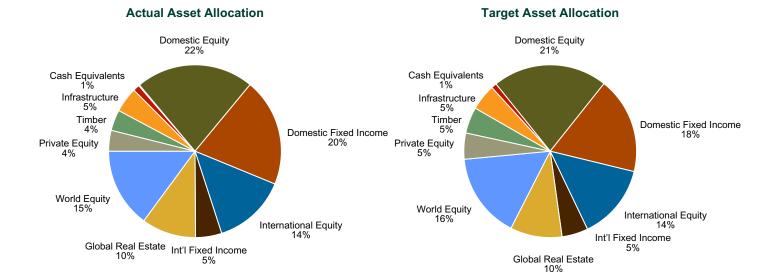
Source: Callan DC Index

<sup>\*</sup>Notes: DC Index inception date is January 2006. DB plan performance is gross of fees. Data provided here is the most recent available at time of publication.

<sup>\*\*</sup>Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

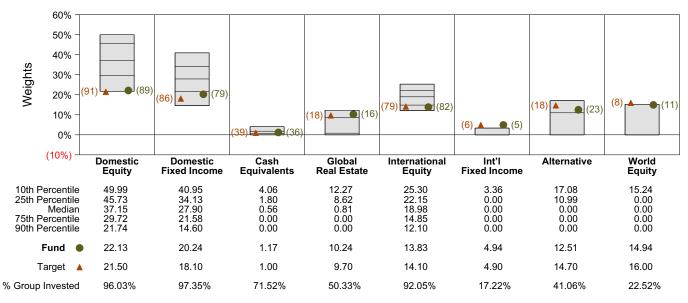
# Actual vs Target Asset Allocation As of September 30, 2015

The top left chart shows the Fund's asset allocation as of September 30, 2015. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Public Fund Sponsor Database.



	\$000s	Weight		Percent	\$000s
Asset Class	Actual	Actual	Target	Difference	Difference
Domestic Equity	1,007,030	22.1%	21.5%	0.6%	28,850
Domestic Fixed Income	920,686	20.2%	18.1%	2.1%	97,195
International Equity	629,104	13.8%	14.1%	(0.3%)	(12,400)
Int'l Fixed Income	224,680	4.9%	4.9%	0.0%	1,746
Global Real Estate	465,862	10.2%	9.7%	0.5%	24,544
World Equity	679,750	14.9%	16.0%	(1.1%)	(48,198)
Private Equity	176,975	3.9%	4.9%	(1.0%)	(45,959)
Timber	177,399	3.9%	4.9%	(1.0%)	(45,535)
Infrastructure	214,829	4.7%	4.9%	(0.2%)	(8,105)
Cash Equivalents	53,360	1.2%	1.0%	0.2%	7,863
Total	4.549.676	100.0%	100.0%		

#### Asset Class Weights vs Public Fund Sponsor Database

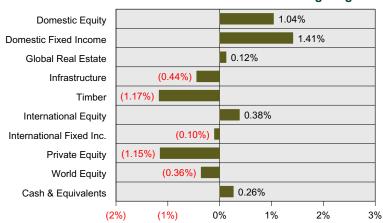


<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



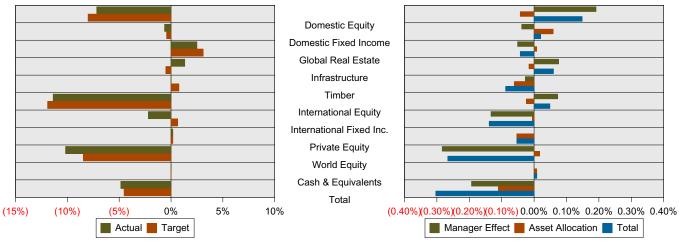
The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.





### **Actual vs Target Returns**

## Relative Attribution by Asset Class



#### Relative Attribution Effects for Quarter ended September 30, 2015

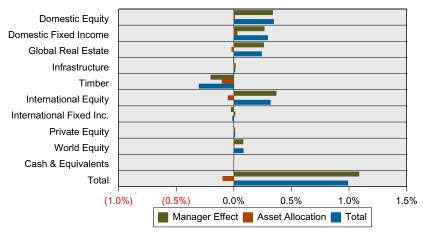
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	(7.17%)	(8.00%)	0.19%	(0.04%)	0.15%
Domestic Fixed Income	20%	18%	(0.63%)	(0.43%)	(0.04%)	0.06%	0.02%
Global Real Estate	10%	10%	2.50%	3.09%	(0.05%)	0.01%	(0.04%)
Infrastructure	4%	5%	1.33%	(0.49%)	0.08%	(0.02%)	0.06%
Timber	4%	5%	0.01%	0.77%	(0.03%)	(0.06%)	(0.09%)
International Equity	14%	14%	(11.37%)	(11.91%)	0.07%	(0.02%)	`0.05%´
International Fixed Inc.	5%	5%	`(2.19%)	0.64%	(0.13%)	(0.01%)	(0.14%)
Private Equity	4%	5%	0.18%	0.18%	0.00%	(0.05%)	(0.05%)
World Equity	16%	16%	(10.18%)	(8.45%)	(0.28%)	0.02%	(0.27%)
Cash & Equivalents	1%	1%	0.03%	0.01%	0.00%	0.01%	0.01%′
Total			(4.83%) =	(4.53%) +	(0.19%) +	(0.11%)	(0.30%)

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

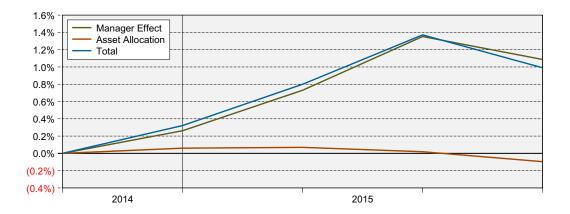


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **One Year Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



### **One Year Relative Attribution Effects**

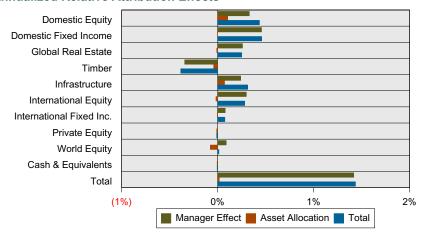
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	1.40%	(0.12%)	0.34%	0.01%	0.35%
Domestic Fixed Income	20%	18%	2.62%	1.21%	0.26%	0.03%	0.29%
Global Real Estate	9%	10%	16.62%	13.48%	0.26%	(0.02%)	0.24%
Infrastructure	4%	5%	(0.73%)	(0.64%)	(0.00%)	0.01%	0.01%
Timber	4%	5%	3.93%	9.26%	(0.20%)	(0.10%)	(0.30%)
International Equity	14%	14%	(8.63%)	(11.00%)	0.37%	(0.05%)	0.32%
International Fixed Inc.	5%	5%	(7.98%)	`(7.67%)	(0.02%)	0.01%	(0.01%)
Private Equity	4%	5%	(6.64%)	(6.64%)	0.00%	0.01%	0.01%
World Equity	16%	16%	(4.59%)	(5.09%)	0.08%	0.00%	0.08%
Cash & Equivalents	1%	1%	0.08%	0.02%	0.00%	(0.00%)	(0.00%)
Total			(0.20%) =	(1.19%) +	1.09% +	(0.10%)	0.99%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

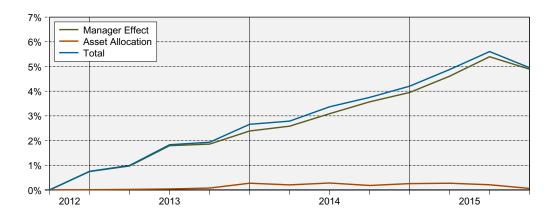


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Three Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



### **Three Year Annualized Relative Attribution Effects**

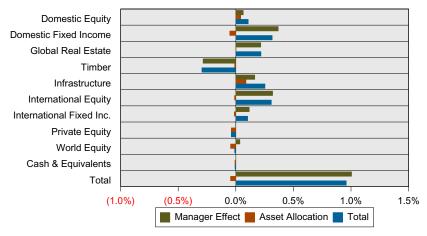
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	22%	13.88%	12.35%	0.33%	0.11%	0.44%
Domestic Fixed Income	19%	18%	4.64%	2.24%	0.46%	0.00%	0.46%
Global Real Estate	9%	10%	14.86%	11.90%	0.26%	(0.01%)	0.25%
Timber	4%	5%	2.37%	9.77%	(0.34%)	(0.04%)	(0.38%)
Infrastructure	4%	5%	6.96%	0.65%	0.24%	0.07%	`0.31%´
International Equity	15%	15%	5.30%	3.23%	0.30%	(0.02%)	0.28%
International Fixed Inc.	5%	5%	(2.63%)	(4.00%)	0.08%	(0.00%)	0.08%
Private Equity	5%	5%	1.44%	1.44%	0.00%	(0.01%)	(0.01%)
World Equity	15%	15%	8.86%	8.58%	0.09%	(0.08%)	`0.01%
Cash & Equivalents	1%	1%	0.07%	0.06%	0.00%	(0.00%)	(0.00%)
Total			7.91% =	6.47% +	1.42% +	0.02%	1.44%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Five Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



### **Five Year Annualized Relative Attribution Effects**

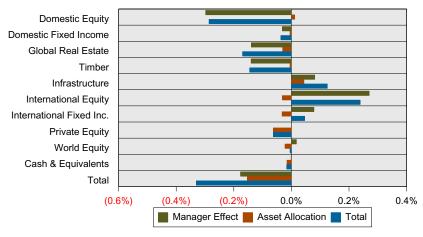
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	13.69%	13.11%	0.06%	0.04%	0.11%
Domestic Fixed Income	20%	20%	5.99%	3.98%	0.37%	(0.05%)	0.32%
Global Real Estate	9%	9%	15.24%	12.55%	0.22%	0.00%	0.22%
Timber	4%	4%	-	-	(0.28%)	(0.01%)	(0.29%)
Infrastructure	3%	4%	-	-	0.16%	0.09%	0.25%
International Equity	16%	16%	4.03%	2.08%	0.32%	(0.01%)	0.31%
International Fixed Inc.	5%	5%	1.24%	(0.85%)	0.12%	(0.01%)	0.10%
Private Equity	5%	5%	4.50%	4.50%	0.00%	(0.04%)	(0.04%)
World Equity	10%	10%	-	-	0.04%	(0.05%)	(0.01%)
Cash & Equivalents	1%	1%	0.09%	0.08%	0.00%	(0.01%)	(0.01%)
Total			8.16% =	7.20% +	1.01% +	(0.05%)	0.96%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

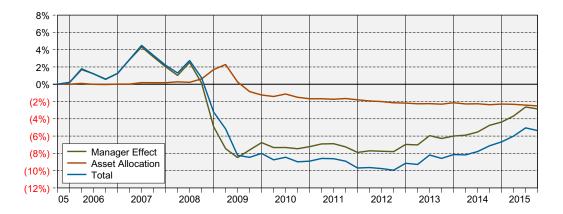


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Ten Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



### **Ten Year Annualized Relative Attribution Effects**

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	32%	33%	6.02%	6.85%	(0.30%)	0.01%	(0.29%)
Domestic Fixed Income	23%	22%	5.97%	5.47%	(0.03%)	(0.01%)	(0.04%)
Global Real Estate	9%	8%	6.37%	8.02%	(0.14%)	(0.03%)	(0.17%)
Timber	2%	2%	-	-	(0.14%)	(0.01%)	(0.15%)
Infrastructure	2%	2%	-	-	0.08%	0.04%	0.12%
International Equity	17%	17%	4.92%	3.38%	0.27%	(0.03%)	0.24%
International Fixed Inc.	5%	5%	4.56%	3.12%	0.08%	(0.03%)	0.05%
Private Equity	4%	5%	2.77%	2.77%	0.00%	(0.06%)	(0.06%)
World Equity	5%	5%	-	-	0.02%	(0.02%)	(0.00%)
Cash & Equivalents	1%	1%	1.12%	1.33%	(0.00%)	(0.02%)	(0.02%)
Total			5.37% =	5.70%	+ (0.18%) +	(0.15%)	(0.33%)

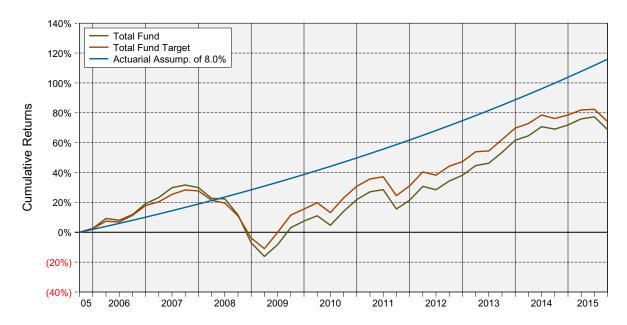
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



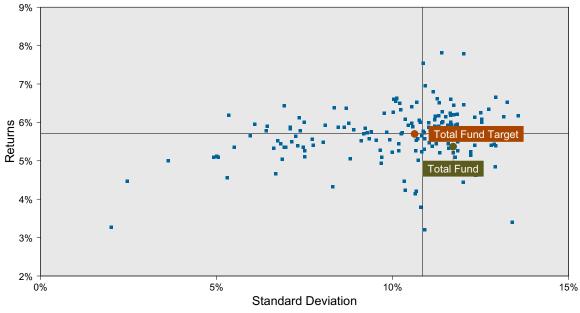
### **Cumulative Performance Relative to Target**

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Public Fund Sponsor Database.

### **Cumulative Returns Actual vs Target**



#### Ten Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

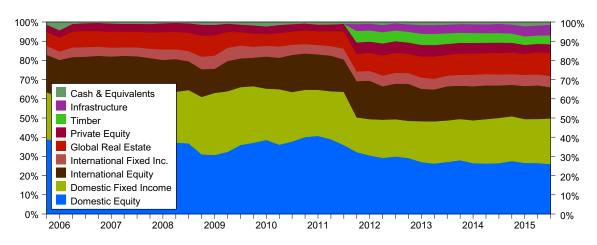
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



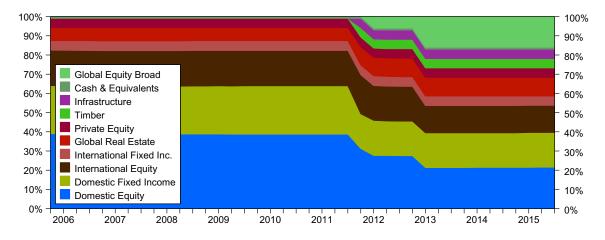
### **Actual vs Target Historical Asset Allocation**

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.

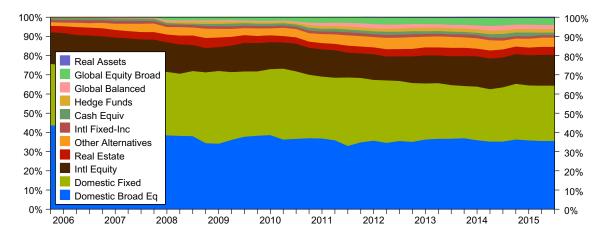
#### **Actual Historical Asset Allocation**



### **Target Historical Asset Allocation**



#### **Average Public Fund Sponsor Database Historical Asset Allocation**



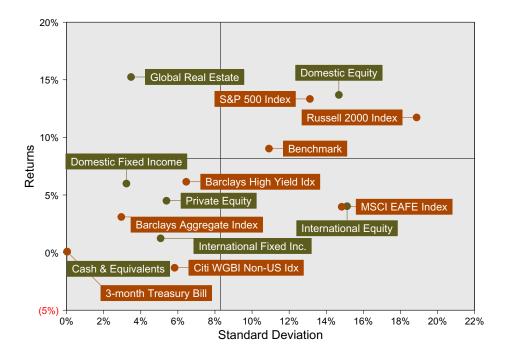
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



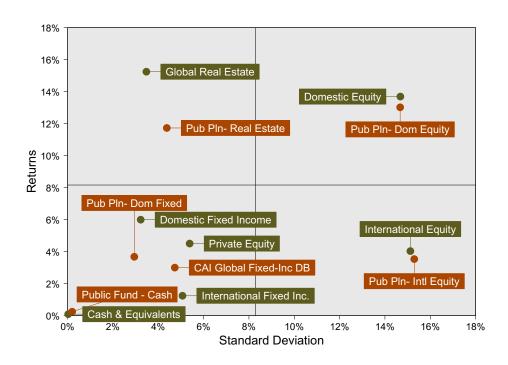
#### **Asset Class Risk and Return**

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

#### Five Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



#### Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median

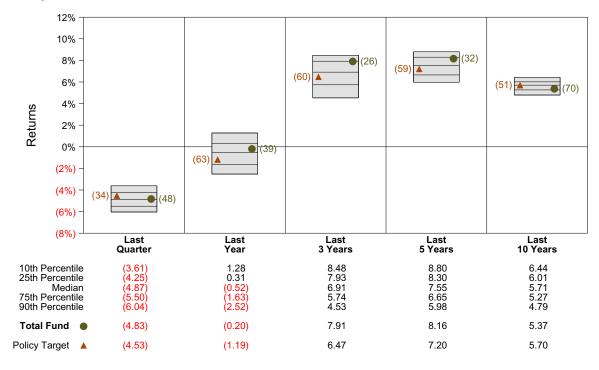




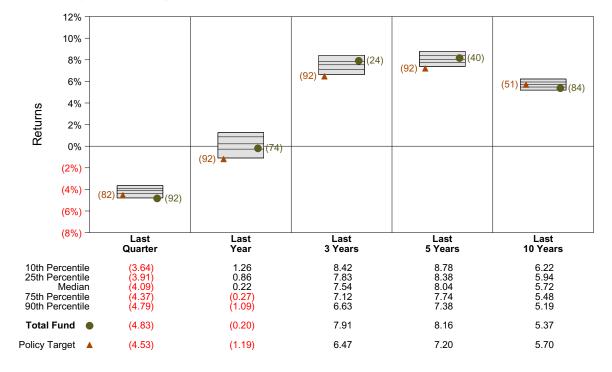
## **Total Fund Ranking**

The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended September 30, 2015. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

#### **Public Fund Sponsor Database**



#### **Asset Allocation Adjusted Ranking**

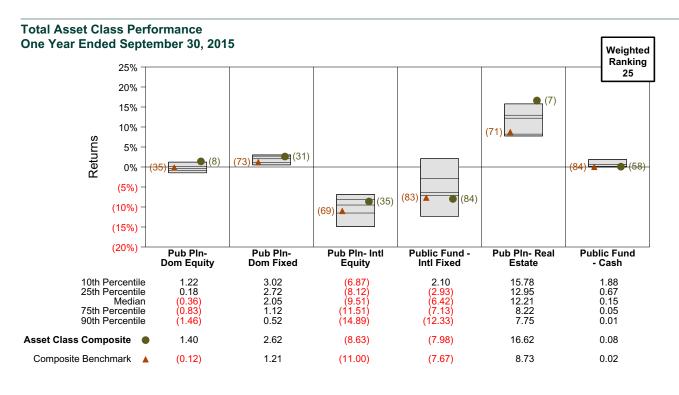


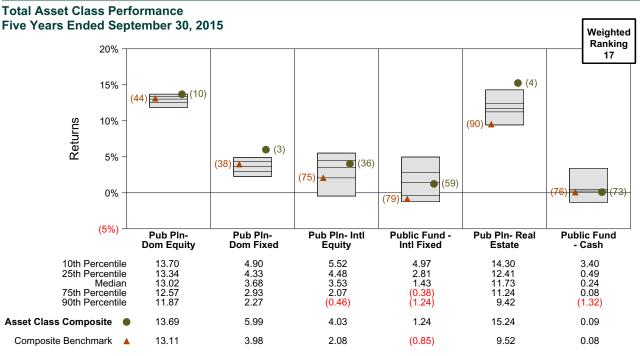
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



## **Asset Class Rankings**

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.





<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



## **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of June 30, 2015. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

## **Asset Distribution Across Investment Managers**

	September 3	0, 2015			June 30, 2015		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight	
GLOBAL EQUITY	\$2,492,859,183	54.79%	\$6,945,947	\$(235,426,354)	\$2,721,339,590	56.63%	
Domestic Equity	\$1,007,030,025	22.13%	\$9,344,113	\$(78,001,872)	\$1,075,687,784	22.38%	
Large Cap Domestic Equity	\$787,763,862	17.31%	\$9,796,778	\$(46,944,888)	\$824,911,971	17.17%	
L.A. Capital	300,594,152	6.61%	(146,161)	(15,700,608)	316,440,921	6.58%	
LACM Enhanced Index	194,115,326	4.27%	(53,120)	(10,779,767)	204,948,213	4.26%	
Northern Trust AM Enh S&P 500	126,474,833	2.78%	10,000,000	(9,059,566)	125,534,400	2.61%	
Parametric Clifton Enh S&P 500	166,579,551	3.66%	(3,940)	(11,404,947)	177,988,438	3.70%	
Small Cap Domestic Equity	\$219,266,164	4.82%	\$(452,665)	\$(31,056,985)	\$250,775,814	5.22%	
Callan	107,803,433	2.37%	Ó	(16,265,111)	124,068,544	2.58%	
Parametric Clifton Enh Small Cap	111,462,731	2.45%	(452,665)	(14,791,874)	126,707,269	2.64%	
International Equity	\$629,104,067	13.83%	\$2,149,107	\$(80,709,110)	\$707,664,070	14.73%	
Developed Int'l Equity	\$498,572,639	10.96%	\$(350,893)	\$(54,406,568)	\$553,330,100	11.51%	
Capital Group	119,663,413	2.63%	(142,984)	(17,163,417)	136,969,814	2.85%	
DFA Int'l Small Cap	71,974,049	1.58%	Ó	(7,307,960)	79,282,009	1.65%	
Northern Trust AM World Ex US	220,918,294	4.86%	(20,903)	(25,999,690)	246,938,887	5.14%	
Wellington Management Co.	86,016,884	1.89%	(187,005)	(3,935,501)	90,139,390	1.88%	
Emerging Markets Equity	\$130,531,428	2.87%	\$2,500,000	\$(26,302,543)	\$154,333,970	3.21%	
Axiom	97,570,068	2.14%	0	(20,296,229)	117,866,297	2.45%	
DFA	32,961,360	0.72%	2,500,000	(6,006,314)	36,467,673	0.76%	
World Equity	\$679,750,317	14.94%	\$(3,862,458)	\$(77,037,299)	\$760,650,074	15.83%	
EPOCH Investment Partners	298,730,960	6.57%	(530,931)	(30,329,923)	329,591,814	6.86%	
LSV Asset Management	381,019,357	8.37%	(3,331,527)	(46,707,376)	431,058,260	8.97%	



#### **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of June 30, 2015. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

#### **Asset Distribution Across Investment Managers**

September 30, 2015 June 30, 2015 Market Value Weight Inv. Return **Market Value** Net New Inv. Weight **Private Equity** \$176,974,774 \$321,928 3.89% \$(684,815) \$177,337,661 3.69% Adams Street Direct Co-Invest Fd 9,930,359 0.22% (1,562,928)131,787 11,361,500 0.24% Adams Street Direct Fund 2010 1,483,417 0.03% (335,659)68,633 1,750,443 0.04% Adams Street 1998 Partnership 121,734 0.00% 935 120,799 0.00% 0 Adams Street 1999 Partnership 531,142 0.01% 0 0 531,142 0.01% Adams Street 2000 Partnership 1,429,371 0.03% 0 0 1,429,371 0.03% Adams Street 2001 Partnership 1,975,406 0.04% 0 (78,341)2,053,747 0.04% Adams Street 2002 Partnership 872 290 0.02% 0 0 872.290 0.02% Adams Street 2003 Partnership 450,724 0.01% (63,614)0 514,338 0.01% Adams Street 2010 Partnership 5,128,901 0.11% 0 0 5,128,901 0.11% Adams Street 2008 Fund 7,039,122 0.15% (196, 246)0 7,235,368 0.15% Adams Street 1999 Non-US 353,630 0.01% (130, 166)0 483,796 0.01% Adams Street 2000 Non-US 768,779 0.02% 0 768,779 0.02% 381.063 (127,441)123.769 Adams Street 2001 Non-US 0.01% 384 735 0.01% Adams Street 2002 Non-US 981,768 0.02% 0 (2,234)984.002 0.02% Adams Street 2003 Non-US 757 548 0.02% (141.644)0 899 192 0.02% Adams Street 2004 Non-US 647,103 0.01% (83,970)0 731,073 0.02% Adams Street 2010 Non-US 2,336,835 0.05% (68,002)0 2,404,837 0.05% Adams Street 2010 Non-US Emg 1,105,151 0.02% 65,010 1,040,141 0.02% 0 Adams Street BVCF IV Fund 3,827,914 3,827,914 0.08% 0 0 0.08% Hearthstone Advisors MSII 0.00% 0 0.00% 0 Hearthstone Advisors MSIII 151.549 0.00% 151,549 0.00% n n 42,261 9,934,616 CorsAir III 9,934,616 0.22% (42,261)0.21% ND Investors 11,075,982 0.24% 25,000 (25,000)11,075,982 0.23% CorsAir IV 16,758,472 0.37% 93,397 (110,274)16,775,349 0.35% Capital International V 15,593,321 0.34% (158,571)(44,688)15,796,580 0.33% (170,888)12,234,473 Capital International VI 15,193,413 0.33% 3,129,828 0.25% 116,845 EIG Energy Fund XIV 18,383,095 0.40% 18,496,623 0.38% (230,373)Lewis & Clark, LP 0.06% 2.724.490 0.06% 2.724.490 0 0 319,251 Lewis & Clark II 9.435.908 0.21% 0 9,116,657 0.19% **Quantum Energy Partners** 7,272,906 0.16% (121,217)0 7,394,123 0.15% Quantum Resources 532,881 0.01% (799,447)466,516 865,812 0.02% Matlin Patterson I 0.00% 0.00% 12,121 0 12,121 Matlin Patterson II 1,515,717 0.03% 0 1,515,719 0.03%

28.268.045

0.62%

(340,284)

(112,869)



Matlin Patterson III

28.721.198

0.60%

## **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of June 30, 2015. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

## **Asset Distribution Across Investment Managers**

	September 30, 2015			June 30, 2015			
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight	
GLOBAL FIXED INCOME	\$1,145,366,048	25.17%	\$(1,847,497)	\$(10,837,449)	\$1,158,050,994	24.10%	
Domestic Fixed Income	\$920,685,804	20.24%	\$(1,640,281)	\$(5,814,460)	\$928,140,545	19.31%	
Inv. Grade Fixed Income	\$665,751,482	14.63%	\$(286,671)	\$6,763,135	\$659,275,019	13.72%	
Declaration Total Return	85,214,474	1.87%	(29,684)	754,378	84,489,780	1.76%	
J. P. Morgan MBS	126,062,208	2.77%	(126,541)	1,839,028	124,349,721	2.59%	
PIMCO DISCO II	88,200,007	1.94%	Ó	342,808	87,857,199	1.83%	
PIMCO MBS	181,424,321	3.99%	(75,015)	2,299,558	179,199,778	3.73%	
PIMCO Unconstrained	91,931,887	2.02%	(47,699)	(2,960,606)	94,940,192	1.98%	
SSgA Long US Treas Index	92,918,584	2.04%	(7,733)	4,487,969	88,438,348	1.84%	
				****			
Below Inv. Grade Fixed Income	\$254,934,322	5.60%	\$(1,353,610)	\$(12,577,595)	\$268,865,527	5.59%	
Goldman Sachs 2006 Offshore	1,410,917	0.03%	(139,870)	(9,213)	1,560,000	0.03%	
Goldman Sachs Offshore V	2,921,771	0.06%	(928,751)	(79,478)	3,930,000	0.08%	
Loomis Sayles	215,217,040	4.73%	(284,989)	(12,488,904)	227,990,933	4.74%	
PIMCO Bravo II Fund	35,384,594	0.78%	0	0	35,384,594	0.74%	
Internationall Fixed Income	\$224,680,244	4.94%	\$(207,216)	\$(5,022,989)	\$229,910,449	4.78%	
Brandywine	124,930,365	2.75%	(125,243)	(5,488,249)	130,543,858	2.72%	
UBS Global Asset Mgmt.	99,749,879	2.19%	(81,972)	465,259	99,366,592	2.07%	
GLOBAL REAL ASSETS	\$858,091,072	18.86%	\$(10,801,846)	\$14,582,485	\$854,310,432	17.78%	
Global Real Estate	\$465,862,491	10.24%	\$(14,578,853)	\$11,791,771	\$468,649,573	9.75%	
Invesco Core Real Estate	187,853,360	4.13%	(159,000)	5,408,341	182,604,019	3.80%	
Invesco Real Estate Fund II	10,453,003	0.23%	(7,501,826)	0	17,954,829	0.37%	
Invesco Real Estate Fund III	32,110,796	0.71%	0	0	32,110,796	0.67%	
Invesco Asia RE Feeder	5,485,321	0.12%	(5,219,000)	(49,458)	10,753,779	0.22%	
Invesco Value Added Fd IV	22,912,293	0.50%	(717,909)	16,938	23,613,264	0.49%	
JP Morgan	172,433,648	3.79%	0	6,339,428	166,094,220	3.46%	
JP Morgan Alternative Fd	354.513	0.01%	0	0,555,420	354.513	0.01%	
JP Morgan China Property Fd	9,876,712	0.22%	(7,510)	7,510	9,876,712	0.01%	
JP Morgan Greater European Opp Fd							
JP Morgan Greater European Opp Fu	24,382,845	0.54%	(973,609)	69,012	25,287,442	0.53%	
Timber	\$177,399,138	3.90%	\$(25,232)	\$25,232	\$177,399,138	3.69%	
TIR Teredo	60,894,655	1.34%	0	0	60,894,655	1.27%	
TIR Springbank	116,504,483	2.56%	(25,232)	25,232	116,504,483	2.42%	
Infrastructure	\$214,829,443	4.72%	\$3,802,240	\$2,765,482	\$208,261,721	4.33%	
JP Morgan Asian Infrastructure	30,600,000	0.67%	179,342	(179,342)	30,600,000	0.64%	
JP Morgan IIF	139,850,021	3.07%	(380,848)	3,110,431	137,120,438	2.85%	
Grosvenor Cust. Infrastructure	40,020,232	0.88%	1,080,436	(71,402)	39,011,198	0.81%	
Grosvenor Cust. Infrastructure II	4,359,190	0.10%	2,923,309	(94,204)	1,530,085	0.01%	
Grosverior Cust. Illifastructure II	4,359,190	0.10%	2,923,309	(94,204)	1,550,065	0.03%	
CASH & CASH EQUIVALENTS	\$53,359,514	1.17%	<b>\$</b> (18,647,295)	\$15.443	\$71,991,366	1.50%	
Cash Account	53,359,514	1.17%	(18,647,295)	15,443	71,991,366	1.50%	
Securities Lending Income	\$0	0.00%	\$(12,759)	<b>\$12,759</b>	_	-	
COUNTY HOUSE	Ψ	0.00 /0	Ψ(12,100)	ψ : Σ, 7 03			
Total Fund	\$4,549,675,818	100.0%	\$(24,363,449)	\$(231,653,116)	\$4,805,692,383	100.0%	



Returns for Periods Ended September 30, 2015

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Equity	Quarter	i Gai	i cais	i cais	i cais
Gross	(8.62%)	(3.49%)	9.32%	_	_
Net	(8.78%)	(3.80%)	8.91%	-	-
Wtd Avg Global Equity Benchmark	(8.41%)	(4.79%)	8.13%	-	-
Domestic Equity					
Gross	(7.17%)	1.40%	13.88%	13.69%	6.02%
Net	(7.23%)	1.25%	13.61%	13.40%	5.70%
Wtd Avg Domestic Equity Benchmark	(8.00%)	(0.12%)	12.35%	13.11%	6.85%
Large Cap Equity					
Gross	(5.59%)	1.98%	14.45%	13.91%	5.43%
Net	(5.62%)	1.83%	14.24%	13.71%	5.18%
Large Cap Benchmark (1)	(6.83%)	(0.61%)	12.66%	13.47%	6.86%
L.A. Capital - Gross	(4.96%)	5.60%	14.87%	15.01%	8.76%
L.A. Capital - Net	(5.01%)	5.38%	14.63%	14.77%	8.55%
Russell 1000 Growth Index	(5.29%)	3.17%	13.61%	14.47%	8.09%
LACM Enhanced Index - Goss	(5.26%)	1.48%	13.77%	13.86%	7.71%
LACM Enhanced Index - Net	(5.29%)	1.36%	13.63%	13.70%	7.54%
Russell 1000 Index	(6.83%)	(0.61%)	12.66%	13.42%	6.95%
Northern Tr AM Enh S&P500 - Gross	(6.50%)	(2.34%)	13.34%	14.39%	7.05%
Northern Tr AM Enh S&P500 - Net	(6.50%)	(2.57%)	12.88%	14.03%	6.86%
S&P 500 Index	(6.44%)	(0.61%)	12.40%	13.34%	6.80%
Parametric Clifton Enh S&P500 - Gross	s (6.41%)	(0.65%)	12.31%	-	-
Parametric Clifton Enh S&P500 - Net	(6.41%)	(0.65%)	12.30%	-	-
S&P 500 Index	(6.44%)	(0.61%)	12.40%	13.34%	6.80%
Small Cap Equity					
Gross	(12.40%)	(0.44%)	11.68%	12.73%	7.33%
Net	(12.56%)	(0.63%)	11.21%	12.20%	6.80%
Russell 2000 Index	(11.92%)	1.25%	11.02%	11.73%	6.55%
Callan - Net	(13.11%)	(3.02%)	10.75%	11.54%	-
Russell 2000 Index	(11.92%)	1.25%	11.02%	11.73%	6.55%
Parametric Clifton Enh SmCap - Gross	(11.70%)	2.19%	11.91%	12.95%	-
Parametric Clifton Enh SmCap - Net	(12.03%)	1.80%	11.43%	12.44%	-
Russell 2000 Index	(11.92%)	1.25%	11.02%	11.73%	6.55%

<sup>(1)</sup> S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.



Returns for Periods Ended September 30, 2015

	Last	Last	Last	Last	Last
	Last	Last	3	5	10
	Quarter	Year	Years	Years	Years
International Equity					
Gross	(11.37%)	(8.63%)	5.30%	4.03%	4.92%
Net	(11.42%)	(8.81%)	4.95%	3.67%	4.51%
Wtd Avg Int'l Equity Benchmark	(11.91%)	(11.00%)	3.23%	2.08%	3.38%
Developed Intl Equity					
Gross	(9.84%)	(6.68%)	7.58%	5.25%	3.99%
Net	(9.90%)	(6.91%)	7.25%	4.91%	3.62%
Benchmark(1)	(10.23%)	(8.66%)	5.63%	3.68%	2.66%
Capital Group - Gross	(12.54%)	(9.39%)	5.57%	4.63%	3.07%
Capital Group - Net	(12.64%)	(9.78%)	5.10%	4.33%	2.84%
Benchmark(1)	(10.23%)	(8.66%)	5.63%	3.68%	2.66%
DFA Int'l Small Cap Value - Net	(9.22%)	(4.00%)	10.98%	7.38%	_
World ex US SC Value		(6.60%)	7.87%	5.27%	4.76%
World ex 05 5C value	(8.82%)	(6.60%)	1.01%	5.27%	4.70%
Northern Tr AM World ex US - Gross	(10.53%)	(9.84%)	-	-	-
Northern Tr AM World ex US - Net	(10.54%)	(9.87%)	-	-	-
MSCI World ex US	(10.57%)	(10.14%)	4.60%	3.42%	2.92%
Wellington Management - Gross	(4.38%)	4.38%	13.37%	10.99%	7.55%
Wellington Management - Net	(4.57%)	3.51%	12.44%	10.05%	6.65%
BMI, EPAC, <\$2 B	(8.35%)	(1.45%)	8.94%	6.08%	4.45%
Emerging Markets Equity					
Gross	(16.81%)	(15.53%)	(3.10%)	(0.49%)	6.23%
Net	(16.81%)	(15.53%)	(3.50%)	(0.95%)	5.69%
Emerging Mkts - Net	(17.90%)	(19.28%)	(5.27%)	(3.57%)	4.27%
Axiom - Net	(17.22%)	(15.57%)	_	_	_
Emerging Mkts - Net	(17.22%)	(19.28%)	(5.27%)	(3.57%)	4.27%
Emerging wikts - Net	(17.5076)	(19.20%)	(3.27 /6)	(3.37 %)	4.27 /0
DFA - Net	(15.45%)	(15.35%)	(0.87%)	(1.38%)	-
Emerging Mkts - Net	(17.90%)	(19.28%)	(5.27%)	(3.57%)	4.27%
World Equity					
Gross	(10.18%)	(4.59%)	8.86%	-	-
Net	(10.64%)	(5.31%)	8.03%	-	-
MSCI World Index	(8.45%)	(5.09%)	8.58%	8.29%	4.73%
EPOCH Investment - Gross(2)	(9.22%)	(1.82%)	10.32%	_	_
EPOCH Investment - Net	(9.36%)	(2.45%)	9.55%	-	-
MSCI World Index	(8.45%)	(5.09%)	8.58%	8.29%	4.73%
LSV Asset Management - Cross(2)	(10.019/)	(6 610/ )		_	_
LSV Asset Management - Gross(3) LSV Asset Management - Net	(10.91%)	(6.61%)	-	-	-
MSCI ACWI Idx	(11.61%) (9.34%)	(7.41%) (6.16%)	- 7.52%	7.39%	- 5.14%
IVIOCI ACVVI IUX	(3.34%)	(0.10%)	1.32%	1.39%	5.14%

<sup>(3)</sup> LSV Asset Management was removed from the Domestic Equity and International Equity Composites to the World Equity Composite as of February 1, 2013.



<sup>(1)</sup> MSCI EAFE through 12/31/1996; 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.

<sup>(2)</sup> EPOCH Investment was removed from the Domestic Equity Composite to the World Equity Composite as of 1/1/2012.

Returns for Periods Ended September 30, 2015

	Last	Last	Last 3	Last 5	Last 10
	Quarter	Year	Years	Years	Years
Private Equity*					
Net	0.18%	(6.66%)	1.39%	4.43%	3.49%
Adams Street Direct Co-Invest Fd	1.22%	23.99%	18.03%	16.66%	-
Adams Street Direct Fund 2010	4.25%	8.91%	14.99%	11.62%	-
Adams Street 1998 Partnership	0.77%	(0.42%)	5.34%	2.35%	1.91%
Adams Street 1999 Partnership	0.00%	(15.44%)	0.69%	4.91%	3.93%
Adams Street 2000 Partnership	0.00%	(7.15%)	(0.02%)	5.44%	6.17%
Adams Street 2001 Partnership	(3.81%)	(2.25%)	8.89%	9.39%	6.93%
Adams Street 2002 Partnership	0.00%	(15.20%)	0.84%	7.59%	5.76%
Adams Street 2003 Partnership	0.00%	13.43%	16.77%	11.95%	9.25%
Adams Street 2010 Partnership	0.00%	18.37%	14.62%	13.36%	-
Adams Street 2008 Fund	0.00%	7.59%	10.92%	9.84%	-
Adams Street 1999 Non-US	0.00%	(12.35%)	2.35%	13.23%	15.49%
Adams Street 2000 Non-US	0.00%	(3.36%)	(0.40%)	4.13%	9.00%
Adams Street 2001 Non-US	48.10%	59.65%	37.56%	20.01%	8.10%
Adams Street 2002 Non-US	(0.23%)	(9.60%)	1.04%	5.64%	9.81%
Adams Street 2003 Non-US	0.00%	(5.76%)	12.19%	15.20%	16.14%
Adams Street 2004 Non-US	0.00%	(6.43%)	11.33%	9.97%	8.08%
Adams Street 2010 Non-US	0.00%	(2.43%)	6.12%	3.01%	-
Adams Street 2010 Non-US Emg	0.00%	16.39%	6.54%	-	-
Adams Street BVCF IV Fund	0.00%	1.39%	30.67%	59.66%	32.03%
CorsAir III	(0.42%)	(8.77%)	(6.57%)	(2.85%)	-
ND Investors	(0.23%)	(5.27%)	0.37%	1.17%	-
CorsAir IV	(0.65%)	30.87%	17.96%	5.37%	-
Capital International V	(0.28%)	(13.32%)	(4.74%)	3.46%	-
Capital International VI	(1.10%)	(21.66%)	(16.43%)	-	-
EIG Energy Fund XIV	0.64%	(23.29%)	(9.98%)	(2.66%)	-
Lewis & Clark, LP	0.00%	(32.09%)	(13.56%)	(5.81%)	0.97%
Lewis & Clark II	0.00%	(14.35%)	(8.65%)	(7.39%)	-
Quantum Energy Partners	0.00%	(28.27%)	8.78%	15.35%	-
Quantum Resources	53.88%	(12.39%)	(6.33%)	14.03%	-
Matlin Patterson I	0.00%	0.00%	(1.23%)	638.01%	178.05%
Matlin Patterson II	(0.00%)	19.60%	(3.46%)	(36.19%)	(24.34%)
Matlin Patterson III	(0.40%)	(2.68%)	8.29%	23.83%	- '

<sup>\*</sup> Corsair III and North Dakota Investors were taken out from the Private Equity Composite on July 1, 2009. They were then added back into the Private Equity Composite on October 1, 2011. At this time Corsair IV, Capital Intl and EIG were also added to this composite.



The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

## Returns for Periods Ended September 30, 2015

	Loot	_	Last	Last	Last
	Last	Last	3	5	10
	Quarter	Year	Years	Years	Years
Global Fixed Income	(2.2.40)				
Gross	(0.94%)	0.46%	3.10%	-	-
Net	(1.00%)	0.20%	2.86%	-	-
Wtd Avg Global FI Benchmark	(0.20%)	(0.75%)	0.88%	-	-
Domestic Fixed Income					
Gross	(0.63%)	2.62%	4.64%	5.99%	5.97%
Net	(0.69%)	2.40%	4.43%	5.77%	5.70%
Wtd Avg Domestic FI Benchmark	(0.43%)	1.21%	2.24%	3.98%	5.47%
Inv. Grade Fixed Income					
Gross	1.03%	3.93%	4.13%	5.22%	5.72%
Net	0.99%	3.80%	4.01%	5.04%	5.50%
Barclays Aggregate Index	1.23%	2.94%	1.71%	3.10%	4.64%
Declaration Total Return - Net	0.89%	3.84%	5.15%	-	-
Libor-3 Month	0.08%	0.27%	0.27%	0.32%	1.76%
LD Margan MDC Crass	1.48%	3.72%	_	_	
J.P. Morgan MBS - Gross J.P. Morgan MBS - Net	1.38%	3.72%	-	-	-
•	1.30%	3.43%	1.98%	3.03%	- 4.71%
Barclays Mortgage	1.30%	3.43%	1.90%	3.03%	4.71%
PIMCO Unconstrained - Gross(1)	(3.12%)	(1.69%)	(0.27%)	-	-
PIMCO Unconstrained - Net	(3.17%)	(2.00%)	(0.45%)	-	-
Blended Benchmark(2)	0.08%	0.27%	0.34%	-	-
PIMCO DiSCO II - Net	0.39%	3.25%	12.49%	-	-
Barclays Aggregate Index	1.23%	2.94%	1.71%	3.10%	4.64%
PIMCO MBS - Gross	1.28%	3.42%	1.71%	_	_
PIMCO MBS - Net	1.24%	3.24%	1.53%	_	_
Barclays Mortgage	1.30%	3.43%	1.98%	3.03%	4.71%
CC-A Lore HC Trace Hr. Crace	F 070/	8.79%			
SSgA Long US Treas Idx - Gross SSgA Long US Treas Idx - Net	5.07% 5.07%	8.75%	-	-	-
Barclays Long Treas	5.08%	8.80%	2.78%	6.22%	6.99%
Dalciays Long Treas	3.00 /6	0.00 /6	2.7070	0.22 /6	0.9976
Below Inv. Grade Fixed Income	/ · ·	/a ===/\	/		
Gross	(4.70%)	(0.73%)	5.98%	8.00%	6.30%
Net	(4.80%)	(1.15%)	5.51%	7.67%	5.89%
Barclays HY Corp 2% Issue	(4.83%)	(3.40%)	3.52%	6.14%	7.26%
Goldman Sachs 2006 Offshore - Net	(0.60%)	25.80%	22.79%	13.42%	-
Goldman Sachs Offshore V - Net	(2.06%)	13.50%	13.42%	14.00%	-
PIMCO Bravo II Fund - Net	0.00%	10.36%	-	-	-
Barclays HY Corp 2% Issue	(4.83%)	(3.40%)	3.52%	6.14%	7.26%
Loomis Sayles - Gross	(5.48%)	(2.59%)	4.76%	6.80%	7.57%
Loomis Sayles - Net	(5.60%)	(3.07%)	4.25%	6.43%	7.21%
Barclays HY Corp 2% Issue	(4.83%)	(3.40%)	3.52%	6.14%	7.26%

<sup>(2)</sup> Libor-3 month through Feb. 28, 2014; Fund's performance through March 31, 2014; Libor-3 month thereafter.



<sup>(1)</sup> The product changed from Commingled Fund to Separate Account in March 2014.

Returns for Periods Ended September 30, 2015

		-	Last	Last	Last
	Last	Last	3	5	10
the state of the s	Quarter	Year	Years	Years	Years
nternational Fixed Income Gross	(2.19%)	(7.98%)	(2.63%)	1.24%	4.56%
Net	(2.27%)	(8.38%)	(2.98%)	0.97%	4.32%
Wtd Avg Int'l FI Benchmark	0.64%	(7.67%)	(4.00%)	(0.85%)	3.12%
Brandywine - Gross	(4.21%)	(7.52%)	(0.61%)	3.52%	6.21%
Brandywine - Net	(4.30%)	(7.86%)	(1.01%)	3.28%	6.03%
Barclays Global Aggregate	0.85%	(3.26%)	(1.59%)	0.81%	3.71%
UBS Global Asset Mgmt Gross	0.47%	(8.12%)	(4.56%)	(1.10%)	2.69%
UBS Global Asset Mgmt Net	0.39%	(8.57%)	(4.88%)	(1.40%)	2.38%
Blended Benchmark(1)	0.64%	(7.67%)	(4.00%)	(0.85%)	3.12%
lobal Real Assets	4.000/	0.400/	0.700/		
Gross Net	1.69% 1.55%	9.46% 8.96%	9.79% 9.37%	=	-
Wtd Avg Global Real Assets Benchmark	1.60%	8.73%	8.45%	-	-
•	1.0070	3 3 70	3.1370		
Iobal Real Estate Gross	2.50%	16.62%	14.86%	15.24%	6.37%
Net	2.30%	15.91%	14.31%	14.45%	4.62%
NCREIF Total Index	3.09%	13.48%	11.90%	12.55%	8.02%
Invesco Core Real Estate - Gross	2.96%	15.83%	13.59%	13.78%	7.08%
Invesco Core Real Estate - Net	2.87%	15.44%	13.17%	13.33%	6.54%
Invesco Real Estate Fund II - Net	0.00%	6.23%	14.50%	24.83%	-
Invesco Real Estate Fund III - Net Invesco Asia RE Feeder - Net	0.00% (0.47%)	18.70% 16.46%	17.92% 9.20%	- 3.14%	-
Invesco Value Added Fd IV - Net	0.07%	-	-	-	-
JP Morgan - Gross	3.82%	16.01%	14.87%	15.47%	7.26%
JP Morgan - Net JP Morgan Alternative Fd - Net	3.34% 0.00%	14.39% (33.28%)	13.72% (8.10%)	14.45% 1.05%	6.17% -
JP Morgan China Property Fd - Net	0.00%	16.55%	24.78%	15.33%	-
JPM Greater European Opp Fd - Net	0.26%	28.03%	7.10%	*****%)	-
NCREIF Total Index	3.09%	13.48%	11.90%	12.55%	8.02%
mber					
Net	0.01%	3.93%	2.37%	-	-
TIR Teredo	0.00%	15.52%	9.18%	6.18%	9.49%
TIR Springbank	0.02%	(1.98%)	(1.41%)	(2.17%)	2.64%
NCREIF Timberland Index	0.77%	9.26%	9.77%	6.28%	7.94%
frastructure					
Gross	1.33%	(0.73%)	6.96%	-	-
Net	1.20%	(1.23%)	6.35%	-	-
JP Morgan Asian Infrastructure - Net	(0.58%)	(3.21%)	7.59%	3.24%	-
JP Morgan IIF - Gross JP Morgan IIF - Net	2.27% 2.07%	(2.25%) (3.02%)	6.28% 5.33%	7.41% 6.26%	-
Grosvenor Cust. Infrastructure - Net	(0.18%)	5.33%	9.24%	0.2076	-
Grosvenor Cust. Infrastructure II - Net	(2.94%)	-	-	=	-
CPI-W	(0.49%)	(0.64%)	0.65%	1.66%	1.78%
and a Conde English and a Mark	0.000/	0.000/	0.6707	0.000/	
ash & Cash Equivalents - Net Cash Account - Net	<b>0.03%</b> 0.03%	<b>0.08%</b> 0.08%	<b>0.07%</b> 0.07%	<b>0.09%</b> 0.09%	<b>1.12%</b> 1.11%
3-month Treasury Bill	0.01%	0.02%	0.06%	0.08%	1.33%
otal Fund					
Gross	(4.83%)	(0.20%)	7.91%	8.16%	5.37%
Net	(4.97%)	(0.52%)	7.54%	7.73%	5.19%
Target*	(4.53%)	(1.19%)	6.47%	7.20%	5.70%

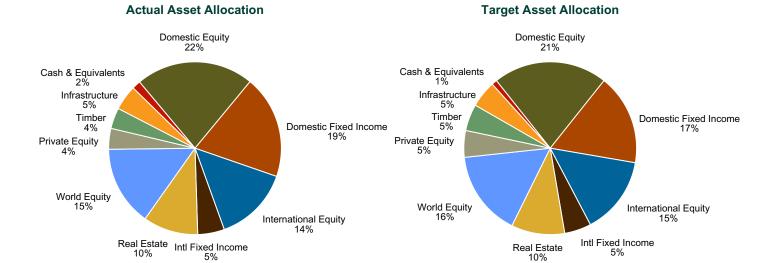
<sup>(1)</sup> Citigroup Non-US Govt through 12/31/2009 and the Barclays Global Aggregate Index ex US thereafter.



<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

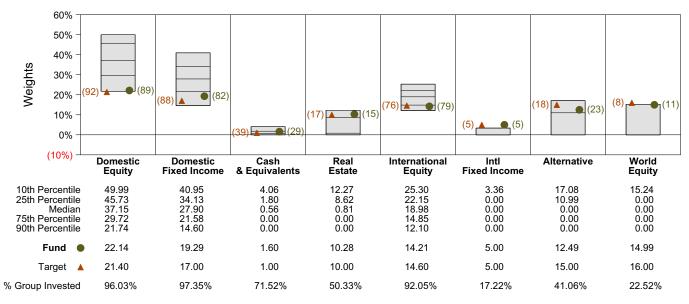
# Actual vs Target Asset Allocation As of September 30, 2015

The top left chart shows the Fund's asset allocation as of September 30, 2015. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Public Fund Sponsor Database.



	\$000s	Weight		Percent	\$000s
Asset Class	Actual	Actual	Target	Difference	Difference
Domestic Equity	508,859	22.1%	21.4%	0.7%	17,113
Domestic Fixed Income	443,328	19.3%	17.0%	2.3%	52,688
International Equity	326,505	14.2%	14.6%	(0.4%)	(8,986)
Intl Fixed Income	114,950	5.0%	5.0%	`0.0%	<b>`</b> 55′
Real Estate	236,165	10.3%	10.0%	0.3%	6,377
World Equity	344,338	15.0%	16.0%	(1.0%)	(23,323)
Private Equity	88,786	3.9%	5.0%	(1.1%)	(26,108)
Timber	89,608	3.9%	5.0%	(1.1%)	(25,286)
Infrastructure	108,680	4.7%	5.0%	(0.3%)	(6,214)
Cash & Equivalents	36,663	1.6%	1.0%	0.6%	13,684
Total	2.297.881	100.0%	100.0%		

#### **Asset Class Weights vs Public Fund Sponsor Database**

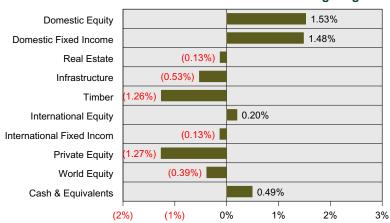


<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.





#### **Actual vs Target Returns**

#### **Relative Attribution by Asset Class** Domestic Equity Domestic Fixed Income Real Estate Infrastructure Timber International Equity International Fixed Incom Private Equity World Equity Cash & Equivalents Total (0.40%)(0.30%)(0.20%)(0.10%) 0.00% 0.10% 0.20% 0.30% 0.40% (15%)(10%)(5%)0% 5% 10% Actual Target Manager Effect Asset Allocation Total

#### Relative Attribution Effects for Quarter ended September 30, 2015

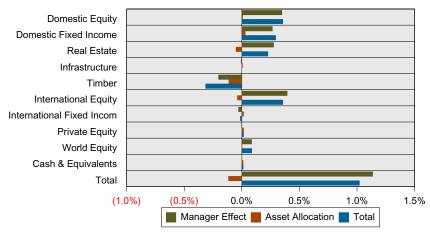
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	(7.16%)	(7.98%)	0.19%	(0.06%)	0.14%
Domestic Fixed Income	18%	17%	(0.71%)	(0.58%)	(0.03%)	0.06%	0.04%
Real Estate	10%	10%	2.54%	3.09%	(0.05%)	(0.01%)	(0.06%)
Infrastructure	4%	5%	1.33%	(0.49%)	0.08%	(0.02%)	0.06%
Timber	4%	5%	0.01%	0.77%	(0.03%)	(0.07%)	(0.09%)
International Equity	15%	15%	(11.46%)	(12.06%)	`0.08%	(0.01%)	`0.07%´
International Fixed Incom	5%	5%	`(2.19%)	0.64%	(0.13%)	(0.01%)	(0.14%)
Private Equity	4%	5%	0.18%	0.18%	`0.00%	(0.06%)	(0.06%)
World Equity	16%	16%	(10.15%)	(8.45%)	(0.28%)	0.02%	(0.26%)
Cash & Equivalents	1%	1%	0.03%	0.01%	0.00%	0.02%	0.02%
Total			(4.91%) =	(4.61%) +	(0.16%) +	(0.13%)	(0.30%)

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

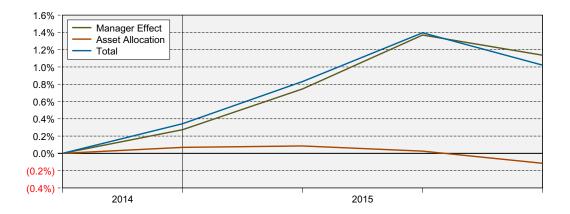


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **One Year Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **One Year Relative Attribution Effects**

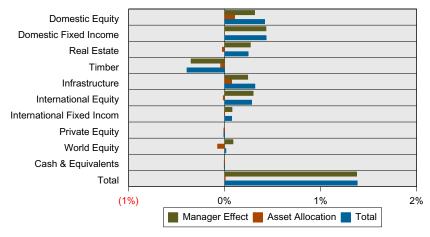
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	1.40%	(0.14%)	0.35%	0.01%	0.36%
Domestic Fixed Income	19%	17%	2.55%	`1.07%	0.27%	0.03%	0.29%
Real Estate	10%	10%	16.78%	13.48%	0.28%	(0.05%)	0.23%
Infrastructure	4%	5%	(0.73%)	(0.64%)	(0.01%)	0.01%	(0.00%)
Timber	4%	5%	3.94%	9.26%	(0.20%)	(0.11%)	(0.31%)
International Equity	15%	15%	(8.75%)	(11.21%)	0.39%	(0.04%)	0.36%
International Fixed Incom	5%	5%	(7.97%)	(7.67%)	(0.03%)	0.02%	(0.01%)
Private Equity	4%	5%	(6.65%)	(6.65%)	0.00%	0.02%	0.02%
World Equity	16%	16%	(4.56%)	(5.09%)	0.08%	0.00%	0.09%
Cash & Equivalents	1%	1%	0.08%	0.02%	0.00%	0.01%	0.01%
Total			(0.25%) =	(1.28%) +	1.14% +	(0.11%)	1.02%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

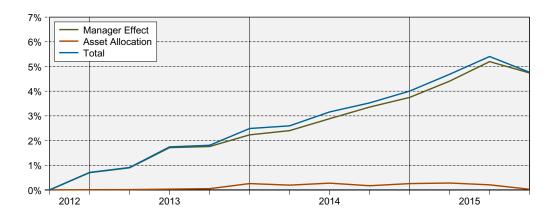


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Three Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **Three Year Annualized Relative Attribution Effects**

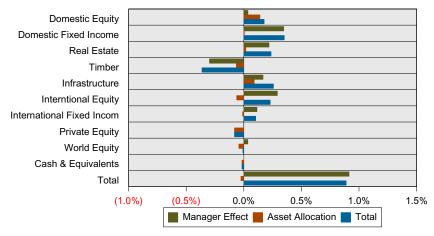
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	22%	13.79%	12.35%	0.31%	0.10%	0.42%
Domestic Fixed Income	18%	17%	4.66%	2.26%	0.43%	0.00%	0.43%
Real Estate	10%	10%	14.91%	11.90%	0.27%	(0.02%)	0.25%
Timber	4%	5%	2.37%	9.77%	(0.35%)	(0.04%)	(0.39%)
Infrastructure	4%	5%	6.98%	0.65%	0.24%	0.07%	0.32%
International Equity	15%	15%	5.01%	3.00%	0.30%	(0.02%)	0.28%
International Fixed Incom	5%	5%	(2.63%)	(4.00%)	0.08%	(0.00%)	0.07%
Private Equity	5%	5%	1.37%	1.37%	0.00%	(0.01%)	(0.01%)
World Equity	15%	15%	8.86%	8.58%	0.09%	(0.07%)	0.01%
Cash & Equivalents	1%	1%	0.07%	0.06%	0.00%	(0.00%)	(0.00%)
Total			7.87% =	6.48% +	1.37% +	0.01%	1.38%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

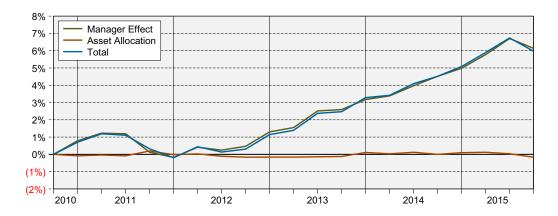


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Five Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **Five Year Annualized Relative Attribution Effects**

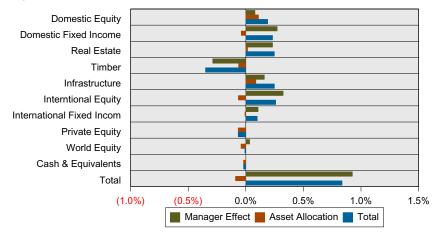
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	13.60%	13.10%	0.04%	0.14%	0.18%
Domestic Fixed Income	20%	19%	6.03%	4.11%	0.35%	0.00%	0.35%
Real Estate	9%	9%	15.40%	12.55%	0.22%	0.02%	0.24%
Timber	4%	4%	-	-	(0.30%)	(0.07%)	(0.36%)
Infrastructure	3%	4%	-	-	0.17%	`0.09%	0.26%
Interntional Equity	16%	16%	3.80%	1.90%	0.29%	(0.06%)	0.23%
International Fixed Incom	5%	5%	1.25%	(0.85%)	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	4.47%	4.47%	0.00%	(0.08%)	(0.08%)
World Equity	10%	10%		- '	0.03%	(0.04%)	(0.01%)
Cash & Equivalents	1%	1%	0.08%	0.08%	0.00%	(0.02%)	(0.02%)
Total			8.10% =	7.21% +	0.91% +	(0.03%)	0.89%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

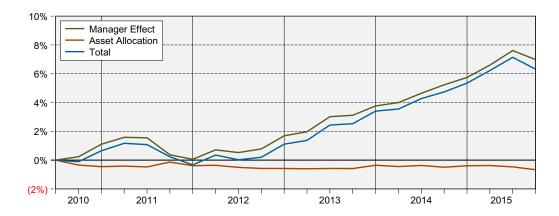


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### Five and One-Quarter Year Annualized Relative Attribution Effects



#### **Cumulative Relative Attribution Effects**



#### Five and One-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual	Effective Target	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
	Weight	Weight					
Domestic Equity	28%	27%	15.37%	14.76%	0.08%	0.11%	0.19%
Domestic Fixed Income	20%	20%	6.18%	4.53%	0.27%	(0.04%)	0.23%
Real Estate	8%	9%	15.90%	12.73%	0.23%	0.02%	0.25%
Timber	4%	4%	-	-	(0.29%)	(0.06%)	(0.35%)
Infrastructure	3%	4%	-	-	0.16%	`0.09%	0.25%
Interntional Equity	16%	16%	6.53%	4.39%	0.32%	(0.06%)	0.26%
International Fixed Incom	5%	5%	3.13%	1.15%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	4.67%	4.67%	0.00%	(0.07%)	(0.07%)
World Equity	9%	9%	-	-	0.03%	(0.04%)	(0.01%)
Cash & Equivalents	1%	1%	0.09%	0.08%	0.00%	(0.02%)	(0.02%)
Total			9.36% =	8.52%	+ 0.93% +	(0.09%)	0.84%

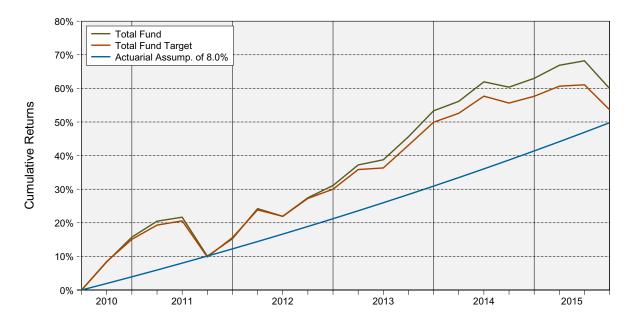
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



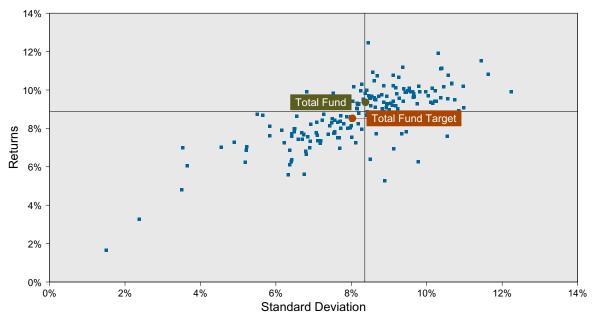
## **Cumulative Performance Relative to Target**

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Public Fund Sponsor Database.

#### **Cumulative Returns Actual vs Target**



#### Five and One-Quarter Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

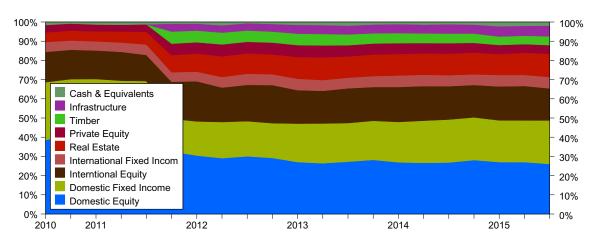
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



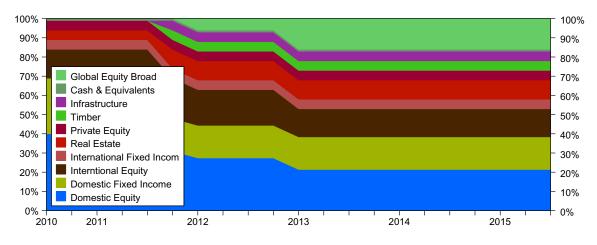
## **Actual vs Target Historical Asset Allocation**

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.

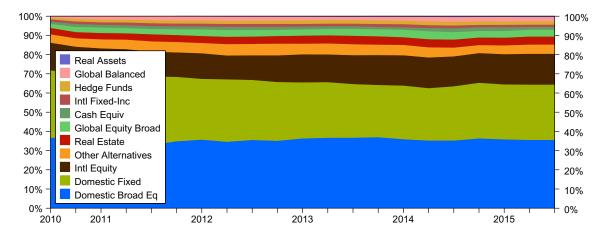
#### **Actual Historical Asset Allocation**



#### **Target Historical Asset Allocation**



#### Average Public Fund Sponsor Database Historical Asset Allocation



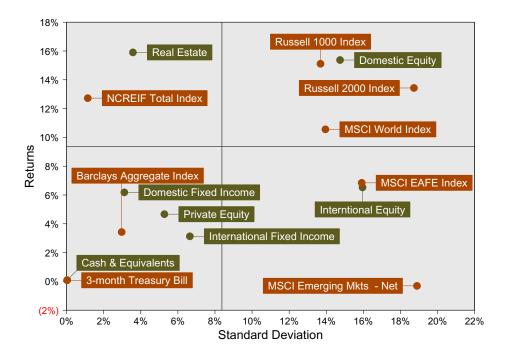
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



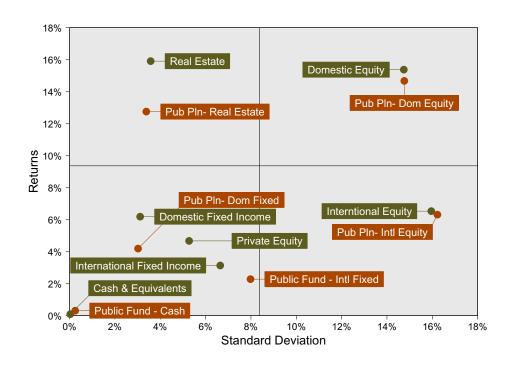
#### **Asset Class Risk and Return**

The charts below show the five and one-quarter year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

#### Five and One-Quarter Year Annualized Risk vs Return **Asset Classes vs Benchmark Indices**



#### Five and One-Quarter Year Annualized Risk vs Return Asset Classes vs Asset Class Median

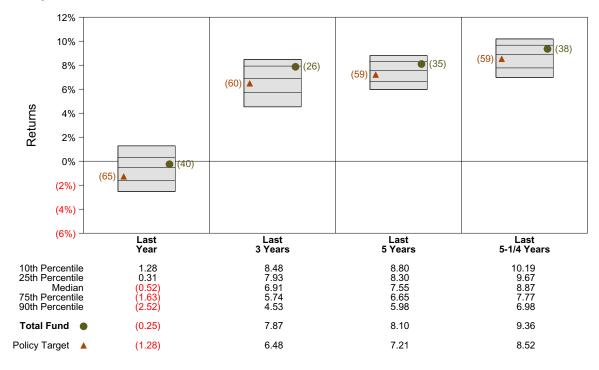




## **Total Fund Ranking**

The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended September 30, 2015. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

#### **Public Fund Sponsor Database**



#### **Asset Allocation Adjusted Ranking**

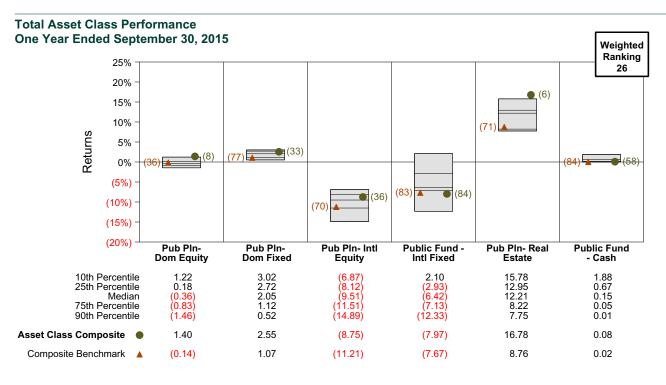


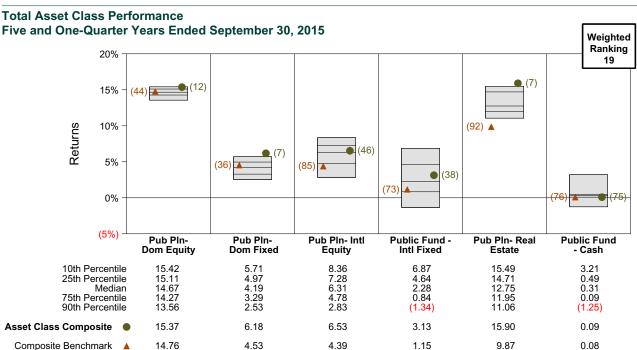
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



## **Asset Class Rankings**

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.





<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



## **Asset Class Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of June 30, 2015. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

## **Asset Class Allocation**

	September 3	0, 2015			June 30, 2	2015
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL EQUITY	\$1,268,488,528	55.20%	\$(621,244)	\$(120,391,007)	\$1,389,500,779	57.36%
Domestic Equity	\$508,859,381	22.14%	\$(2,874,025)	\$(39,859,215)	\$551,592,621	22.77%
Large Cap	400,321,887	17.42%	476	(24,124,025)	424,445,436	17.52%
Small Cap	108,537,494	4.72%	(2,874,501)	(15,735,190)	127,147,185	5.25%
International Equity	\$326,505,113	14.21%	\$2,401,949	\$(41,951,162)	\$366,054,326	15.11%
Developed Intl Equity	255,570,009	11.12%	2,401,949	(27,606,701)	280,774,762	11.59%
Emerging Markets	70,935,104	3.09%	0	(14,344,460)	85,279,564	3.52%
World Equity	\$344,338,449	14.99%	\$194,394	\$(38,742,137)	\$382,886,192	15.80%
Private Equity	\$88,785,585	3.86%	\$(343,562)	\$161,507	\$88,967,640	3.67%
GLOBAL FIXED INCOME	\$558,277,333	24.30%	\$3,636,696	\$(5,722,329)	\$560,362,966	23.13%
Domestic Fixed Income	\$443,327,797	19.29%	\$3,742,711	\$(3,152,498)	\$442,737,584	18.28%
Inv. Grade Fixed Income	312,839,350	13.61%	1,781,583	3,162,450	307,895,316	12.71%
Below Inv. Grade Fixed Income	130,488,447	5.68%	1,961,128	(6,314,948)	134,842,268	5.57%
International Fixed Income	\$114,949,536	5.00%	\$(106,015)	\$(2,569,831)	\$117,625,382	4.86%
GLOBAL REAL ASSETS	\$434,452,823	18.91%	\$(5,479,851)	\$7,389,511	\$432,543,163	17.85%
Real Estate	236,164,921	10.28%	(7,390,623)	5,977,736	237,577,808	9.81%
Timber	89,607,737	3.90%	(12,745)	12,745	89,607,737	3.70%
Infrastructure	108,680,166	4.73%	1,923,517	1,399,031	105,357,618	4.35%
Cash & Equivalents	\$36,662,503	1.60%	\$(3,523,557)	\$9,182	\$40,176,878	1.66%
Securities Lending Income	\$0	0.00%	\$(6,422)	\$6,422		
Total Fund	\$2,297,881,187	100.0%	\$(5,994,378)	\$(118,708,220)	\$2,422,583,785	100.0%

PLEASE REFER TO PAGES 36-38 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.



The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

#### Returns for Periods Ended September 30, 2015

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-1/4 Years
Global Equity	Quarter	ı Gai	i cais	i cai s	i cai s
Gross	(8.64%)	(3.53%)	9.17%	_	_
Net	(8.81%)	(3.84%)	8.80%	-	-
Wtd Avg Global Equity Benchmark	(8.45%)	(4.94%)	7.96%	-	-
Domestic Equity					
Gross	(7.16%)	1.40%	13.79%	13.60%	15.37%
Net	(7.22%)	1.25%	13.58%	13.34%	15.10%
Wtd Avg Domestci Equity Benchmark	(7.98%)	(0.14%)	12.35%	13.10%	14.76%
Large Cap Equity					
Gross	(5.60%)	1.97%	14.42%	13.91%	15.78%
Net	(5.63%)	1.82%	14.23%	13.64%	15.50%
Benchmark(1)	(6.83%)	(0.61%)	12.66%	13.47%	15.11%
Small Cap Equity					
Gross	(12.39%)	(0.43%)	11.62%	12.53%	13.98%
Net	(12.56%)	(0.63%)	11.36%	12.28%	13.71%
Russell 2000 Index	(11.92%)	1.25%	11.02%	11.73%	13.43%
International Equity					
Gross	(11.46%)	(8.75%)	5.01%	3.80%	6.53%
Net	(11.51%)	(8.92%)	4.74%	3.47%	6.18%
Wtd Avg Intl Equity Benchmark	(12.06%)	(11.21%)	3.00%	1.90%	4.39%
Developed Intl Equity					
Gross	(9.84%)	(6.66%)	7.49%	5.06%	7.72%
Net	(9.90%)	(6.89%)	7.21%	4.74%	7.39%
Benchmark(2)	(10.23%)	(8.66%)	5.63%	3.68%	5.76%
Emerging Markets					
Gross	(16.82%)	(15.54%)	(3.19%)	(0.53%)	2.34%
Net	(16.82%)	(15.54%)	(3.45%)	(0.89%)	1.96%
Benchmark(3)	(17.90%)	(19.28%)	(5.27%)	(3.54%)	(0.25%)
World Equity					
Gross	(10.15%)	(4.56%)	8.86%	-	-
Net	(10.64%)	(5.31%)	8.02%	-	-
MSCI World Index	(8.45%)	(5.09%)	8.58%	8.29%	10.56%
Private Equity					
Net	0.18%	(6.66%)	1.33%	4.37%	4.57%

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.



<sup>(1)</sup> S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

<sup>(2) 50%</sup> Hedged EAFE through 3/31/2011 and MSCI EAFE thereafter.

<sup>(3)</sup> MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Last	3	5	5-1/4
	Quarter	Year	Years	Years	Years
Global Fixed Income	- Quartor		100.0	100.0	
Gross	(1.02%)	0.32%	3.05%	_	_
Net	(1.09%)	0.05%	2.80%	_	_
Wtd Avg Global Fixed Income Benchmark	(0.28%)	(0.92%)	0.85%	_	_
That the closest most sold below and	(0.2070)	(0.0270)	0.0070		
Domestic Fixed Income					
Gross	(0.71%)	2.55%	4.66%	6.03%	6.18%
Net	(0.77%)	2.33%	4.44%	5.78%	5.93%
Wtd Avg Domestic FI Benchmark	(0.58%)	1.07%	2.26%	4.11%	4.53%
nv. Grade Fixed Income					
Gross	1.03%	3.92%	4.13%	5.22%	5.30%
Net	0.99%	3.79%	4.01%	5.05%	5.12%
Barclays Aggregate Index	1.23%	2.94%	1.71%	3.10%	3.43%
, 65 6					
Below Inv. Grade Fixed Income	(4.700/)	(0.700/)	E 000/	0.000/	0.0001
Gross	(4.70%)	(0.73%)	5.98%	8.00%	8.68%
Net	(4.80%)	(1.15%)	5.51%	7.55%	8.24%
Barclays HY Corp 2% Issue	(4.83%)	(3.40%)	3.52%	6.14%	7.14%
nternational Fixed Income					
Gross	(2.19%)	(7.97%)	(2.63%)	1.25%	3.13%
Net	(2.27%)	(8.38%)	(2.98%)	0.89%	2.77%
Wtd Avg Intl Fixed Income Benchmark	0.64%	(7.67%)	(4.00%)	(0.85%)	1.15%
Global Real Assets					
Gross	1.71%	9.56%	9.83%	-	-
Net	1.57%	9.06%	9.41%	-	-
Wtd Avg Global Real Assets Benchmark	1.61%	8.80%	8.51%	-	-
Real Estate					
Gross	2.54%	16.78%	14.91%	15.40%	15.90%
Net	2.34%	16.06%	14.36%	14.83%	15.32%
NCREIF Total Index	3.09%	13.48%	11.90%	12.55%	12.73%
	3.5576	10. 10 /0	11.5070	12.0070	12.10/0
Гimber					
Net	0.01%	3.94%	2.37%	-	-
NCREIF Timberland Index	0.77%	9.26%	9.77%	6.28%	5.95%
nfrastructure					
Gross	1.33%	(0.73%)	6.98%	-	-
Net	1.20%	(1.23%)	6.35%	-	-
CPI-W	(0.49%)	(0.64%)	0.65%	1.66%	1.62%
Cash & Equivalents - Net	0.03%	0.08%	0.07%	0.08%	0.09%
3-month Treasury Bill	0.01%	0.02%	0.06%	0.08%	0.08%
Total Fund					
Gross	(4.91%)	(0.25%)	7.87%	8.10%	9.36%
	· /	,	7.52%	7.75%	9.00%
Net	(5.05%)	(0.58%)	/ 5.7%		

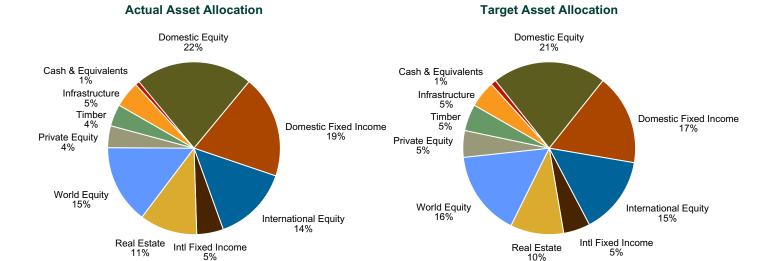
PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.



<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts -Net and 1.0% 3-month Treasury Bill.

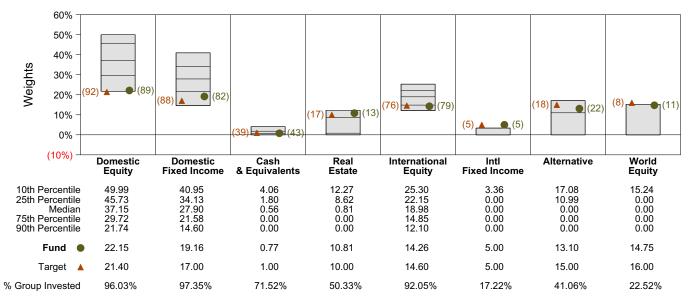
# Actual vs Target Asset Allocation As of September 30, 2015

The top left chart shows the Fund's asset allocation as of September 30, 2015. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Public Fund Sponsor Database.



	\$000s	Weight		Percent	\$000s
Asset Class	Actual	Actual	Target	Difference	Difference
Domestic Equity	439,882	22.1%	21.4%	0.7%	14,888
Domestic Fixed Income	380,495	19.2%	17.0%	2.2%	42,883
International Equity	283,276	14.3%	14.6%	(0.3%)	(6,673)
Intl Fixed Income	99,292	5.0%	5.0%	0.0%	(5)
Real Estate	214,638	10.8%	10.0%	0.8%	16,043′
World Equity	293,016	14.8%	16.0%	(1.2%)	(24,737)
Private Equity	81,495	4.1%	5.0%	(0.9%)	(17,803)
Timber	81,277	4.1%	5.0%	(0.9%)	(18,020)
Infrastructure	97,306	4.9%	5.0%	(0.1%)	`(1,991)
Cash & Equivalents	15,276	0.8%	1.0%	(0.2%)	(4,584)
Total	1.985.953	100.0%	100.0%	,	, , , , , , , , , , , , , , , , , , , ,

#### **Asset Class Weights vs Public Fund Sponsor Database**

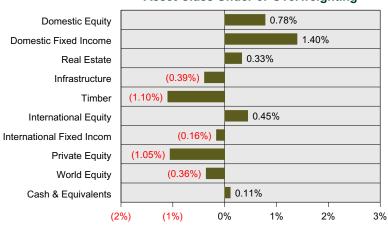


<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.





## **Actual vs Target Returns**

#### **Relative Attribution by Asset Class** Domestic Equity Domestic Fixed Income Real Estate Infrastructure Timber International Equity International Fixed Incom Private Equity World Equity Cash & Equivalents Total (0.40%)(0.30%)(0.20%)(0.10%) 0.00% 0.10% 0.20% 0.30% 0.40% (15%)(10%)(5%)0% 5% 10% Actual Target Manager Effect Asset Allocation Total

#### Relative Attribution Effects for Quarter ended September 30, 2015

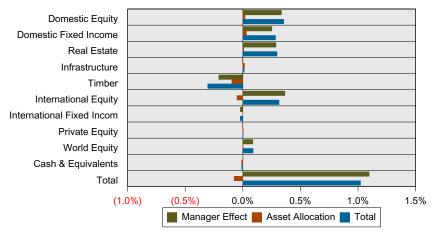
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	(7.15%)	(7.98%)	0.19%	(0.03%)	0.16%
Domestic Fixed Income	18%	17%	(0.77%)	(0.58%)	(0.04%)	0.06%	0.02%
Real Estate	10%	10%	2.54%	3.09%	(0.05%)	0.02%	(0.03%)
Infrastructure	5%	5%	1.33%	(0.49%)	0.08%	(0.01%)	0.06%
Timber	4%	5%	0.01%	0.77%	(0.03%)	(0.06%)	(0.09%)
International Equity	15%	15%	(11.22%)	(11.69%)	`0.06%	(0.03%)	0.04%
International Fixed Incom	5%	5%	`(2.19%)	0.64%	(0.13%)	(0.01%)	(0.14%)
Private Equity	4%	5%	0.18%	0.18%	0.00%	(0.05%)	(0.05%)
World Equity	16%	16%	(10.15%)	(8.45%)	(0.28%)	0.02%	(0.26%)
Cash & Equivalents	1%	1%	0.03%	0.01%	0.00%	(0.00%)	0.00%
Total			(4.84%) =	(4.55%) +	(0.20%) +	(0.09%)	(0.29%)

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

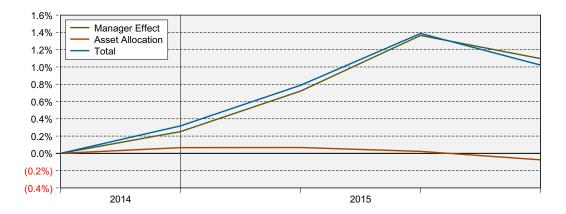


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **One Year Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **One Year Relative Attribution Effects**

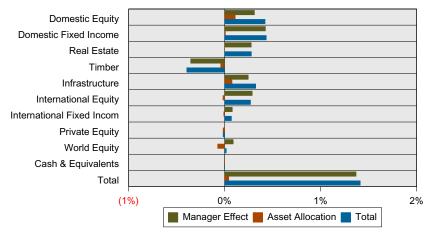
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	1.40%	(0.14%)	0.34%	0.02%	0.35%
Domestic Fixed Income	18%	17%	2.50%	`1.07%´	0.25%	0.03%	0.28%
Real Estate	10%	10%	16.78%	13.48%	0.29%	0.01%	0.30%
Infrastructure	4%	5%	(0.73%)	(0.64%)	(0.00%)	0.02%	0.01%
Timber	4%	5%	3.95%	9.26%	(0.21%)	(0.09%)	(0.30%)
International Equity	15%	15%	(8.44%)	(10.70%)	0.37%	(0.05%)	0.31%
International Fixed Incom	5%	5%	(7.97%)	`(7.67%)	(0.02%)	(0.00%)	(0.02%)
Private Equity	4%	5%	(6.64%)	(6.64%)	0.00%	0.00%	0.00%
World Equity	16%	16%	(4.56%)	(5.09%)	0.09%	0.00%	0.09%
Cash & Equivalents	1%	1%	0.08%	0.02%	0.00%	(0.01%)	(0.01%)
Total			(0.17%) =	(1.19%) +	1.10% +	(0.08%)	1.02%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

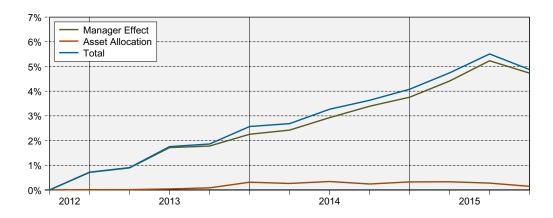


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Three Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **Three Year Annualized Relative Attribution Effects**

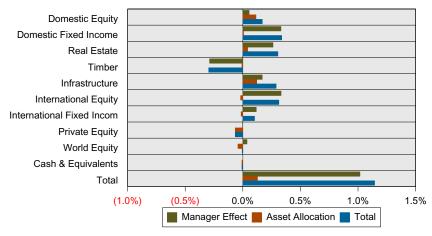
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	22%	13.79%	12.35%	0.31%	0.11%	0.42%
Domestic Fixed Income	18%	17%	4.65%	2.26%	0.43%	0.01%	0.43%
Real Estate	10%	10%	14.91%	11.90%	0.28%	0.00%	0.28%
Timber	5%	5%	2.37%	9.77%	(0.35%)	(0.04%)	(0.39%)
Infrastructure	4%	5%	6.98%	0.65%	0.25%	0.08%	0.32%
International Equity	15%	15%	5.46%	3.53%	0.29%	(0.02%)	0.27%
International Fixed Incom	5%	5%	(2.62%)	(4.00%)	0.08%	(0.01%)	0.07%
Private Equity	5%	5%	1.39%	1.39%	0.00%	(0.02%)	(0.02%)
World Equity	15%	15%	8.86%	8.58%	0.09%	(0.07%)	0.02%
Cash & Equivalents	1%	1%	0.07%	0.06%	0.00%	(0.00%)	(0.00%)
Total			7.97% =	6.56% +	1.37% +	0.04%	1.41%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

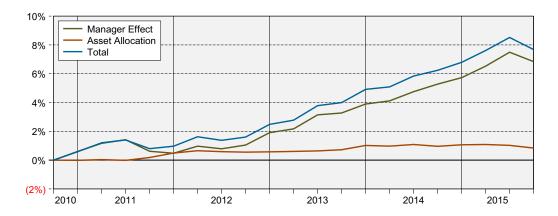


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### **Five Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### **Five Year Annualized Relative Attribution Effects**

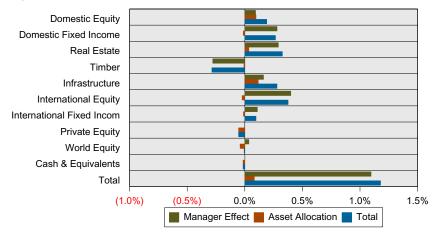
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	26%	13.62%	13.09%	0.06%	0.11%	0.17%
Domestic Fixed Income	18%	17%	5.88%	3.97%	0.33%	0.01%	0.34%
Real Estate	10%	10%	15.40%	12.55%	0.26%	0.04%	0.30%
Timber	4%	4%	-	-	(0.29%)	(0.01%)	(0.30%)
Infrastructure	3%	4%	-	-	`0.17%´	0.12%	0.29%
International Equity	18%	17%	4.11%	2.32%	0.33%	(0.02%)	0.31%
International Fixed Incom	5%	5%	1.25%	(0.85%)	0.12%	(0.01%)	0.10%
Private Equity	5%	5%	4.50%	4.50%	0.00%	(0.07%)	(0.07%)
World Equity	10%	10%	-	-	0.04%	(0.04%)	(0.01%)
Cash & Équivalents	1%	1%	0.08%	0.08%	0.00%	(0.01%)	(0.01%)
Total			8.20% =	7.06% +	1.02% +	0.13%	1.14%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

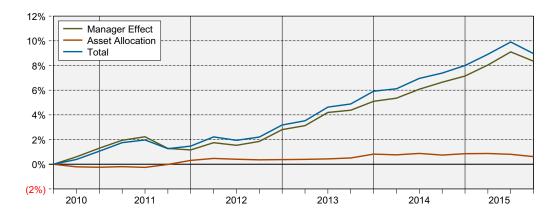


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

#### Five and One-Quarter Year Annualized Relative Attribution Effects



#### **Cumulative Relative Attribution Effects**



#### Five and One-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	15.38%	14.75%	0.09%	0.10%	0.19%
Domestic Equity  Domestic Fixed Income	18%	17%	6.20%	4.56%	0.28%	(0.01%)	0.19%
Real Estate	10%	10%	15.90%	12.73%	0.29%	0.03%	0.33%
Timber	4%	4%	-	-	(0.28%)	(0.01%)	(0.29%)
Infrastructure	3%	4%	-	-	0.16%	0.12%	0.28%
International Equity	18%	18%	6.76%	4.67%	0.40%	(0.02%)	0.38%
International Fixed Incom	5%	5%	3.13%	1.15%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	4.70%	4.70%	0.00%	(0.05%)	(0.05%)
World Equity	9%	9%	-	-	0.04%	(0.04%)	(0.01%)
Cash & Equivalents	1%	1%	0.09%	0.08%	0.00%	(0.02%)	(0.02%)
Total			9.69% =	8.51%	+ 1.10% +	0.08%	1.18%

<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



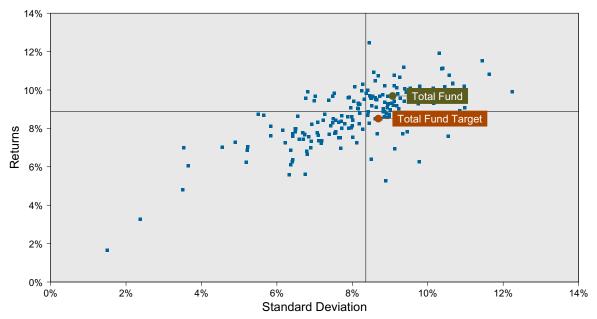
## **Cumulative Performance Relative to Target**

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Public Fund Sponsor Database.

#### **Cumulative Returns Actual vs Target**



#### Five and One-Quarter Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

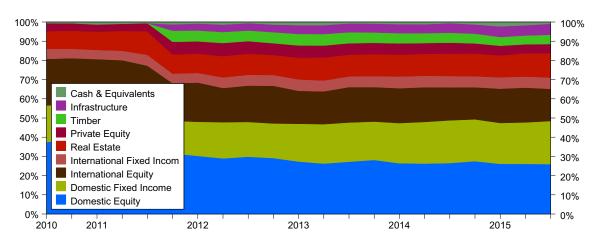
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



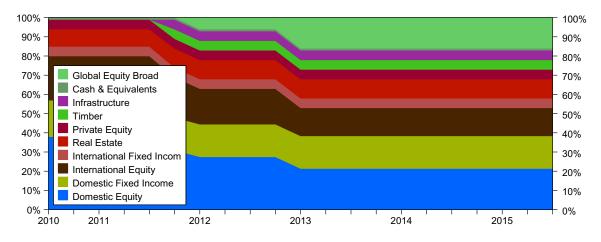
## **Actual vs Target Historical Asset Allocation**

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.

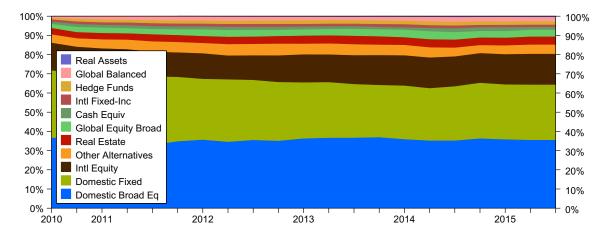
#### **Actual Historical Asset Allocation**



#### **Target Historical Asset Allocation**



#### Average Public Fund Sponsor Database Historical Asset Allocation



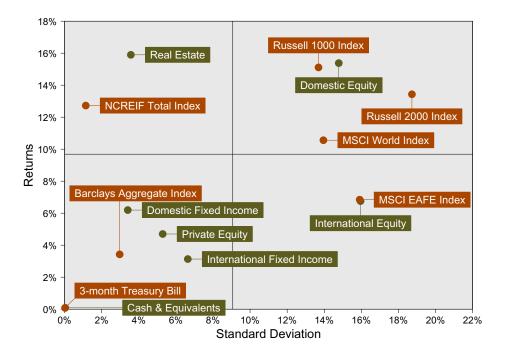
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



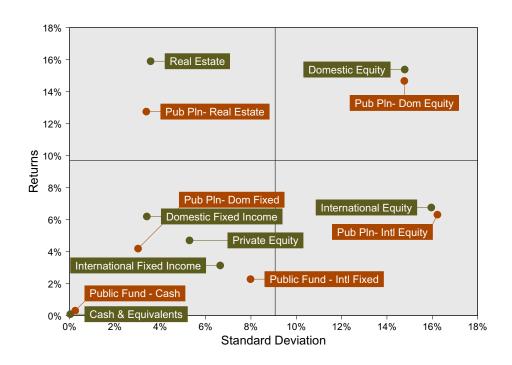
#### **Asset Class Risk and Return**

The charts below show the five and one-quarter year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

#### Five and One-Quarter Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



#### Five and One-Quarter Year Annualized Risk vs Return Asset Classes vs Asset Class Median

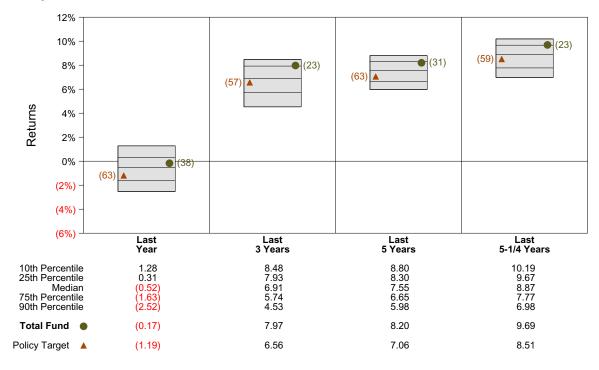




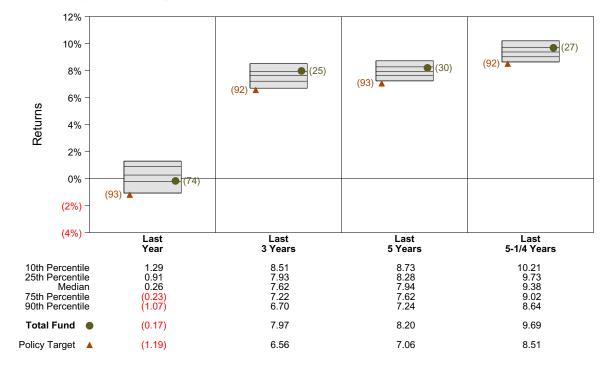
## **Total Fund Ranking**

The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended September 30, 2015. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

#### **Public Fund Sponsor Database**



#### **Asset Allocation Adjusted Ranking**

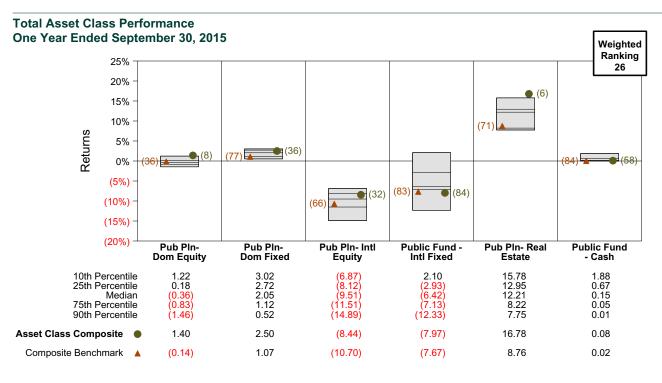


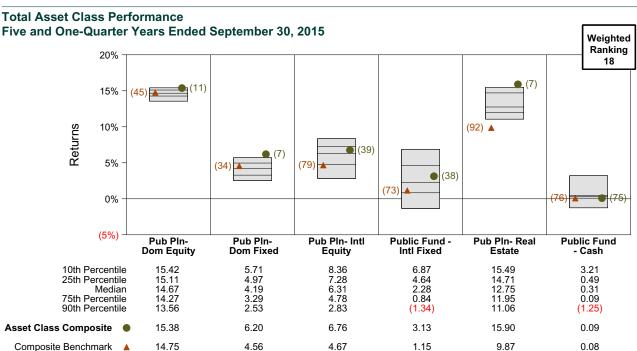
<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



## **Asset Class Rankings**

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.





<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.



## **Asset Class Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of June 30, 2015. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

## **Asset Class Allocation**

	September 30, 2015				June 30, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL EQUITY	\$1,097,668,560	55.27%	\$2,724,197	\$(103,307,993)	\$1,198,252,356	56.96%
Domestic Equity	\$439,881,961	22.15%	\$10,920,273	\$(33,500,642)	\$462,462,330	21.98%
Large Cap	345,000,161	17.37%	9,112,031	(20,340,728)	356,228,858	16.93%
Small Cap	94,881,800	4.78%	1,808,242	(13,159,915)	106,233,472	5.05%
International Equity	\$283,275,783	14.26%	\$(1,276,740)	\$(36,241,952)	\$320,794,475	15.25%
Developed Intl Equity	229,657,419	11.56%	(3,163,740)	(25,383,590)	258,204,749	12.27%
Emerging Markets	53,618,364	2.70%	1,887,000	(10,858,362)	62,589,726	2.98%
World Equity	\$293,015,783	14.75%	\$(6,603,985)	\$(33,713,644)	\$333,333,412	15.84%
Private Equity	\$81,495,033	4.10%	\$(315,351)	\$148,245	\$81,662,139	3.88%
GLOBAL FIXED INCOME	\$479,787,185	24.16%	\$543,333	\$(5,155,402)	\$484,399,254	23.02%
Fixed Income Comp	\$380,494,942	19.16%	\$785,031	\$(2,937,342)	\$382,647,254	18.19%
Investment Grade Fixed	268,308,366	13.51%	3,391,313	2,694,740	262,222,313	12.46%
Below Inv. Grade Fixed Income	112,186,576	5.65%	(2,606,283)	(5,632,082)	120,424,941	5.72%
International Fixed Income	\$99,292,243	5.00%	\$(241,698)	\$(2,218,060)	\$101,752,001	4.84%
GLOBAL REAL ASSETS	\$393,221,760	19.80%	\$(5,006,300)	\$6,697,033	\$391,531,027	18.61%
Real Estate	214,638,054	10.81%	(6,716,953)	5,432,854	215,922,154	10.26%
Timber	81,277,245	4.09%	(11,560)	11,560	81,277,245	3.86%
Infrastructure	97,306,462	4.90%	1,722,214	1,252,619	94,331,628	4.48%
Cash & Equivalents	\$15,275,609	0.77%	\$(14,358,498)	\$5,876	\$29,628,231	1.41%
Securities Lending Income	\$0	0.00%	\$(5,630)	\$5,630	-	<del>-</del>
Total Fund	\$1,985,953,114	100.0%	\$(16,102,897)	\$(101,754,856)	\$2,103,810,868	100.0%

PLEASE REFER TO PAGES 36-38 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.



# **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

#### Returns for Periods Ended September 30, 2015

		•			1
	1	1	Last	Last	Last
	Last Quarter	Last Year	3 Years	5 Years	5-1/4 Years
Clabal Facility	Quarter	I eai	Tears	Tears	Tears
Global Equity	(0.570/)	(0.400/)	0.000/		
Gross	(8.57%)	(3.49%)	9.28%	-	-
Net	(8.74%)	(3.80%)	8.91%	-	-
Wtd Avg Global Equity Benchmark	(8.35%)	(4.81%)	8.10%	-	-
Domestic Equity					
Gross	(7.15%)	1.40%	13.79%	13.62%	15.38%
Net	(7.21%)	1.24%	13.59%	13.36%	15.11%
Wtd Avg Domestic Equity Benchma	ark (7.98%)	(0.14%)	12.35%	13.09%	14.75%
Large Cap Equity					
Gross	(5.60%)	1.97%	14.38%	13.89%	15.76%
Net	(5.63%)	1.82%	14.19%	13.63%	15.49%
Benchmark(1)	(6.83%)	(0.61%)	12.66%	13.47%	15.11%
Benefittarik(1)	(0.0070)	(0.0170)	12.0070	10.47 70	10.1170
Small Cap Equity	(40.000()	(0.400()	4.4.0007	40.550/	4.4.0.407
Gross	(12.39%)	(0.43%)	11.62%	12.57%	14.01%
Net	(12.56%)	(0.63%)	11.37%	12.31%	13.74%
Russell 2000 Index	(11.92%)	1.25%	11.02%	11.73%	13.43%
International Equity					
Gross	(11.22%)	(8.44%)	5.46%	4.11%	6.76%
Net	(11.27%)	(8.62%)	5.18%	3.79%	6.42%
Wtd Avg Intl Equity Benchmark	(11.69%)	(10.70%)	3.53%	2.32%	4.67%
Developed Intl Equity					
Gross	(9.84%)	(6.66%)	7.50%	5.22%	7.79%
Net	(9.90%)	(6.89%)	7.22%	4.90%	7.46%
Benchmark(2)	(10.23%)	(8.66%)	5.63%	3.68%	5.76%
Emerging Markets					
Gross	(16.82%)	(15.54%)	(3.19%)	(0.57%)	2.30%
Net	(16.82%)	(15.54%)	(3.45%)	(0.94%)	1.92%
Benchmark(3)	(17.90%)	(19.28%)	(5.27%)	(3.54%)	(0.25%)
Deliciliark(3)	(17.90%)	(19.26%)	(5.27%)	(3.54%)	(0.25%)
World Equity					
Gross	(10.15%)	(4.56%)	8.86%	-	-
Net	(10.64%)	(5.30%)	8.02%	-	-
MSCI World Index	(8.45%)	(5.09%)	8.58%	8.29%	10.56%
Private Equity					
Net	0.18%	(6.66%)	1.34%	4.40%	4.60%
		, ,			

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.



<sup>(1)</sup> S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

<sup>(2) 50%</sup> Hedged EAFE through 3/31/2011 and MSCI EAFE thereafter.

<sup>(3)</sup> MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

# **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

## Returns for Periods Ended September 30, 2015

	Last	Last	Last 3	Last 5	Last 5-1/4
	Quarter	Year	Years	Years	Years
Global Fixed Income					
Gross	(1.06%)	0.21%	3.01%	-	-
Net	(1.13%)	(0.06%)	2.77%	-	-
Wtd Avg Global Fixed Inc. Benchmark	(0.28%)	(0.92%)	0.85%	-	-
Domestic Fixed Income					
Gross	(0.77%)	2.50%	4.65%	5.88%	6.20%
Net	(0.83%)	2.27%	4.43%	5.77%	6.07%
Wtd Avg Domestic FI Benchmark	(0.58%)	1.07%	2.26%	3.97%	4.56%
nv. Grade Fixed Income					
Gross	1.03%	3.91%	4.12%	5.22%	5.31%
Net	0.99%	3.77%	4.01%	5.05%	5.13%
Barclays Aggregate Index	1.23%	2.94%	1.71%	3.10%	3.43%
Below Inv. Grade Fixed Income					
	(4.700/)	(0.700/)	E 000/	7 000/	0.070/
Gross	(4.70%)	(0.73%)	5.98%	7.99%	8.67%
Net	(4.80%)	(1.15%)	5.51%	7.54%	8.23%
Barclays HY Corp 2% Issue	(4.83%)	(3.40%)	3.52%	6.14%	7.14%
nternational Fixed Income					
Gross	(2.19%)	(7.97%)	(2.62%)	1.25%	3.13%
Net	(2.27%)	(8.38%)	(2.98%)	0.89%	2.77%
Wtd Avg Intl Fixed Income Benchmark	0.64%	(7.67%)	(4.00%)	(0.85%)	1.15%
Global Real Assets					
Gross	1.71%	9.60%	9.85%	_	_
Net	1.57%	9.10%	9.43%	_	_
Wtd Avg Global Real Assets Benchmark	1.61%	8.80%	8.51%	_	_
With Any Clobal Fical Addition Belletinian	1.0170	0.0070	0.0170		
Real Estate					
Gross	2.54%	16.78%	14.91%	15.40%	15.90%
Net	2.34%	16.06%	14.36%	14.82%	15.32%
NCREIF Total Index	3.09%	13.48%	11.90%	12.55%	12.73%
limber					
Net	0.01%	3.95%	2.37%	=	-
NCREIF Timberland Index	0.77%	9.26%	9.77%	6.28%	5.95%
nfrastructure					
Gross	1.33%	(0.73%)	6.98%	_	_
Net	1.20%	(1.23%)	6.35%	_	_
CPI-W	(0.49%)	(0.64%)	0.65%	1.66%	1.62%
Sach 9 Equivalents Not	0.039/	0.099/	0.079/	0.099/	0.009/
Cash & Equivalents - Net	0.03%	0.08%	0.07%	0.08%	0.09%
3-month Treasury Bill	0.01%	0.02%	0.06%	0.08%	0.08%
otal Fund					
Gross	(4.84%)	(0.17%)	7.97%	8.20%	9.69%
Net	(4.98%)	(0.50%)	7.63%	7.84%	9.32%

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.



<sup>\*</sup> Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts -Net and 1.0% 3-month Treasury Bill.

# L.A. Capital Period Ended September 30, 2015

#### **Investment Philosophy**

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

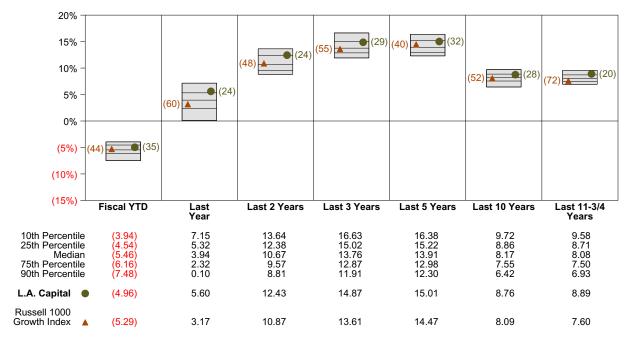
## **Quarterly Summary and Highlights**

- L.A. Capital's portfolio posted a (4.96)% return for the quarter placing it in the 35 percentile of the CAI Large Cap Growth Style group for the quarter and in the 24 percentile for the last year.
- L.A. Capital's portfolio outperformed the Russell 1000 Growth Index by 0.33% for the quarter and outperformed the Russell 1000 Growth Index for the year by 2.42%.

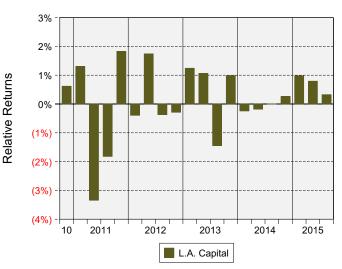
## **Quarterly Asset Growth**

Beginning Market Value	\$316,440,921
Net New Investment	\$-146,161
Investment Gains/(Losses)	\$-15,700,608
Ending Market Value	\$300,594,152

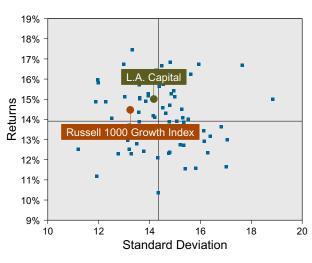
## Performance vs CAI Large Cap Growth Style (Gross)



#### Relative Return vs Russell 1000 Growth Index



# CAI Large Cap Growth Style (Gross) Annualized Five Year Risk vs Return





# L.A. Capital Management Enhanced Index Period Ended September 30, 2015

#### **Investment Philosophy**

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

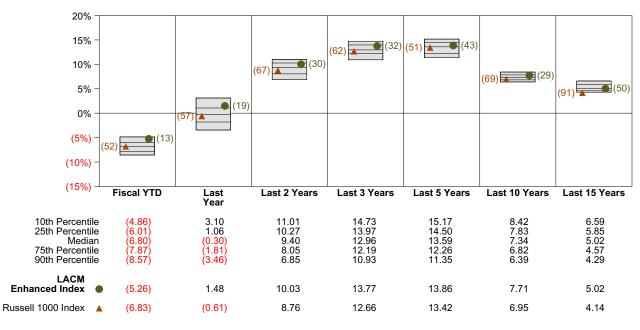
## **Quarterly Summary and Highlights**

- LACM Enhanced Index's portfolio posted a (5.26)% return for the quarter placing it in the 13 percentile of the CAI Large Cap Core Style group for the quarter and in the 19 percentile for the last year.
- LACM Enhanced Index's portfolio outperformed the Russell 1000 Index by 1.57% for the quarter and outperformed the Russell 1000 Index for the year by 2.09%.

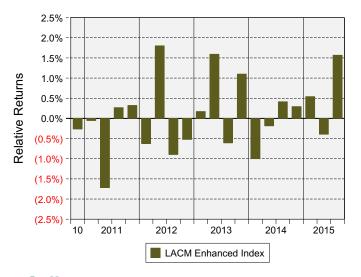
## **Quarterly Asset Growth**

Beginning Market Value	\$204,948,213
Net New Investment	\$-53,120
Investment Gains/(Losses)	\$-10,779,767
Ending Market Value	\$194,115,326

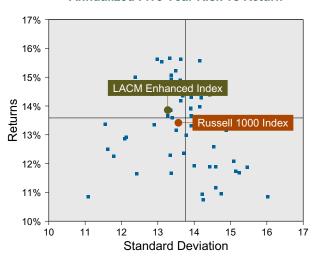
## Performance vs CAI Large Cap Core Style (Gross)



## Relative Return vs Russell 1000 Index



# CAI Large Cap Core Style (Gross) Annualized Five Year Risk vs Return





# Northern Trust AM Enh S&P500 Period Ended September 30, 2015

#### **Investment Philosophy**

Northern Trust AM Enhanced S&P 500 employs a quantitative investment approach, focusing on the stock selection process as the principal source of value added. The account invests primarily in a broadly diversified portfolio of equity securities that include securities convertible into equity securities (including common stock), warrants, rights and units or shares in trusts, exchange traded funds and investment companies. The Investment Manager intends to use futures and options to manage market risk associated with the account's investments.

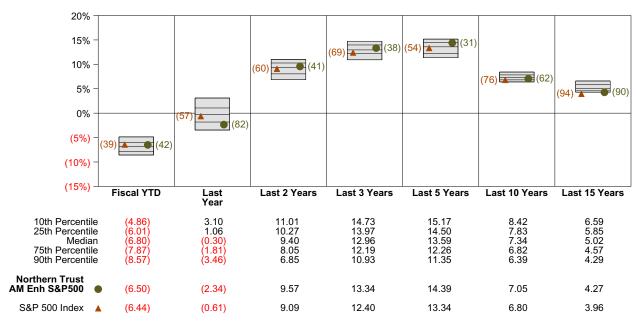
#### **Quarterly Summary and Highlights**

- Northern Trust AM Enh S&P500's portfolio posted a (6.50)% return for the quarter placing it in the 42 percentile of the CAI Large Cap Core Style group for the quarter and in the 82 percentile for the last year.
- Northern Trust AM Enh S&P500's portfolio underperformed the S&P 500 Index by 0.06% for the quarter and underperformed the S&P 500 Index for the year by 1.73%.

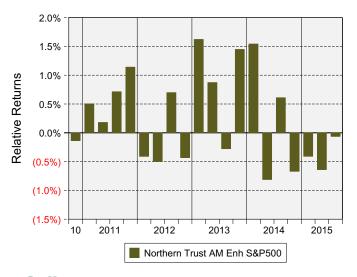
## **Quarterly Asset Growth**

Beginning Market Value	\$125,534,400
Net New Investment	\$10,000,000
Investment Gains/(Losses)	\$-9,059,566
Ending Market Value	\$126,474,833

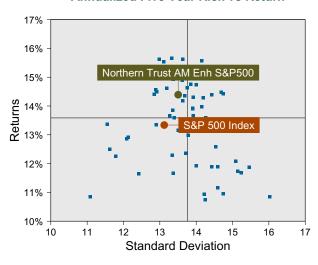
## Performance vs CAI Large Cap Core Style (Gross)



## Relative Return vs S&P 500 Index



# CAI Large Cap Core Style (Gross) Annualized Five Year Risk vs Return





# Parametric Clifton Enh S&P Period Ended September 30, 2015

#### **Investment Philosophy**

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

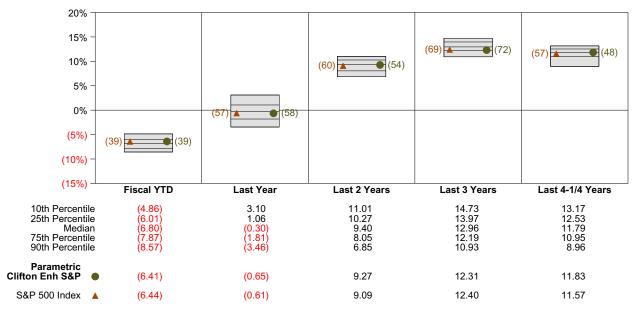
## **Quarterly Summary and Highlights**

- Parametric Clifton Enh S&P's portfolio posted a (6.41)% return for the quarter placing it in the 39 percentile of the CAI Large Cap Core Style group for the quarter and in the 58 percentile for the last year.
- Parametric Clifton Enh S&P's portfolio outperformed the S&P 500 Index by 0.03% for the quarter and underperformed the S&P 500 Index for the year by 0.04%.

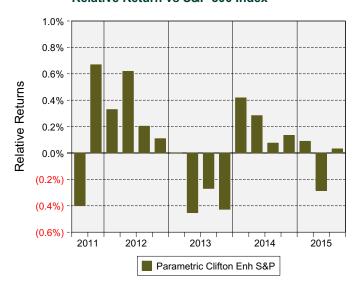
## **Quarterly Asset Growth**

Beginning Market Value	\$177,988,438
Net New Investment	\$-3,940
Investment Gains/(Losses)	\$-11,404,947
Ending Market Value	\$166,579,551

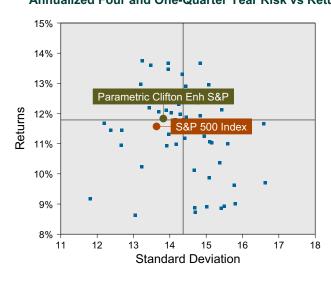
## Performance vs CAI Large Cap Core Style (Gross)



## Relative Return vs S&P 500 Index



# CAI Large Cap Core Style (Gross) Annualized Four and One-Quarter Year Risk vs Return





## Callan

## Period Ended September 30, 2015

#### **Investment Philosophy**

The fundamental belief inherent in this strategy is that the stock-weightings reflected in the average portfolio of a broad universe of institutional Small Cap managers is a more efficient representation of the Small Cap market than any of the more mechanical Small Cap indices that are typically employed as benchmarks. Hence, a portfolio designed to generate the return of this average portfolio in the most cost-effective possible manner will consistently out-perform the standard benchmarks on a risk-adjusted basis over time. This process results in a total portfolio made up of 40 equity sub-advisors, equally weighted in the Fund's portfolio, which very closely tracks the performance of the average actively managed institutional small cap product (historical tracking error since inception of approximately one percent annualized).

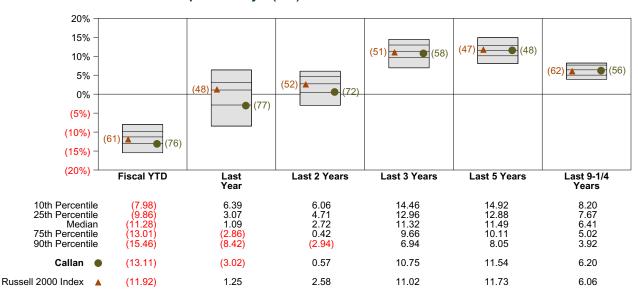
#### **Quarterly Summary and Highlights**

- Callan's portfolio posted a (13.11)% return for the quarter placing it in the 76 percentile of the CAI MF - Small Cap Broad Style group for the quarter and in the 77 percentile for the last year.
- Callan's portfolio underperformed the Russell 2000 Index by 1.19% for the quarter and underperformed the Russell 2000 Index for the year by 4.26%.

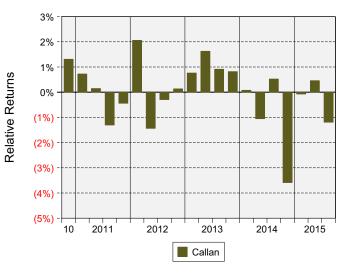
# **Quarterly Asset Growth**

Beginning Market Value	\$124,068,544
Net New Investment	\$0
Investment Gains/(Losses)	\$-16,265,111
Ending Market Value	\$107,803,433

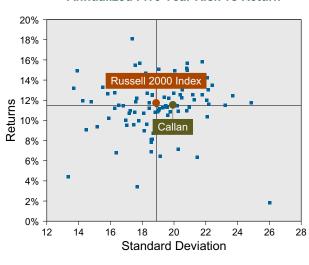
#### Performance vs CAI MF - Small Cap Broad Style (Net)



#### Relative Return vs Russell 2000 Index



# CAI MF - Small Cap Broad Style (Net) Annualized Five Year Risk vs Return





# Parametric Clifton Enh SmCap Period Ended September 30, 2015

#### **Investment Philosophy**

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

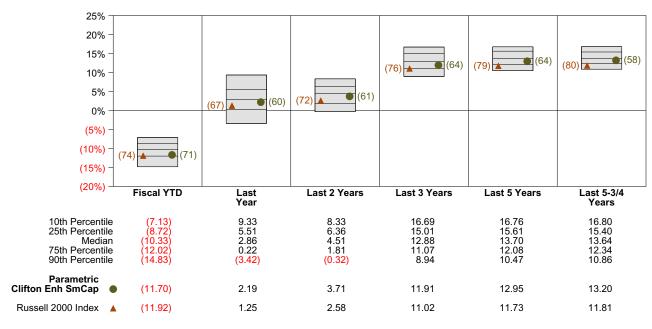
## **Quarterly Summary and Highlights**

- Parametric Clifton Enh SmCap's portfolio posted a (11.70)% return for the quarter placing it in the 71 percentile of the CAI Small Capitalization Style group for the quarter and in the 60 percentile for the last year.
- Parametric Clifton Enh SmCap's portfolio outperformed the Russell 2000 Index by 0.22% for the quarter and outperformed the Russell 2000 Index for the year by 0.94%.

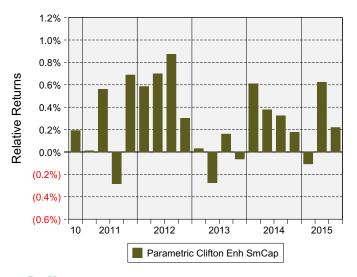
## **Quarterly Asset Growth**

Beginning Market Value	\$126,707,269
Net New Investment	\$-452,665
Investment Gains/(Losses)	\$-14,791,874
Ending Market Value	\$111 462 731

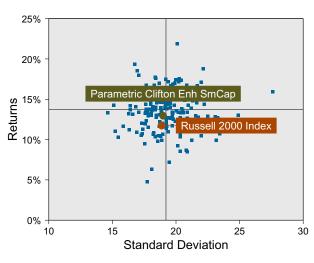
## Performance vs CAI Small Capitalization Style (Gross)



## Relative Return vs Russell 2000 Index



# CAI Small Capitalization Style (Gross) Annualized Five Year Risk vs Return





# Capital Group Period Ended September 30, 2015

#### **Investment Philosophy**

The Portfolio will invest primarily in equity or equity type securities of companies in developed countries excluding the U.S. These equity securities will be listed on a stock exchange or traded in another recognized market and include, but are not limited to, common and preferred stocks, securities convertible or exchangeable into common or preferred stock, warrants, rights and depository arrangements. \*MSCI EAFE through 12/31/1996, 50% Hedged EAFE through 03/31/2011 and MSCI EAFE again thereafter.

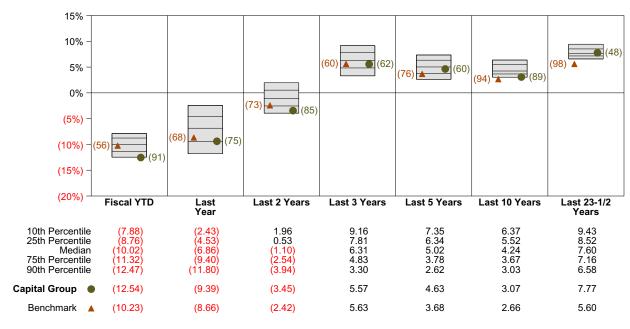
#### **Quarterly Summary and Highlights**

- Capital Group's portfolio posted a (12.54)% return for the quarter placing it in the 91 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 75 percentile for the last year.
- Capital Group's portfolio underperformed the Benchmark by 2.31% for the quarter and underperformed the Benchmark for the year by 0.73%.

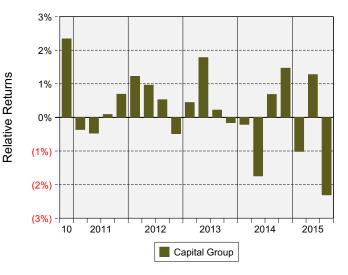
## **Quarterly Asset Growth**

Beginning Market Value	\$136,969,814
Net New Investment	\$-142,984
Investment Gains/(Losses)	\$-17,163,417
Ending Market Value	\$119,663,413

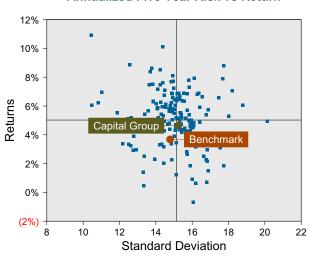
## Performance vs CAI Non-U.S. Equity Style (Gross)



## Relative Return vs Benchmark



# CAI Non-U.S. Equity Style (Gross) Annualized Five Year Risk vs Return





# DFA International Small Cap Value Fund Period Ended September 30, 2015

#### **Investment Philosophy**

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

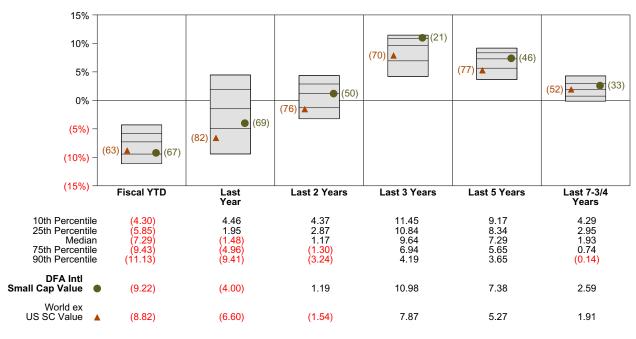
#### **Quarterly Summary and Highlights**

- DFA Intl Small Cap Value's portfolio posted a (9.22)% return for the quarter placing it in the 67 percentile of the MF -International Small Cap Obj group for the quarter and in the 69 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 0.40% for the quarter and outperformed the World ex US SC Value for the year by 2.59%.

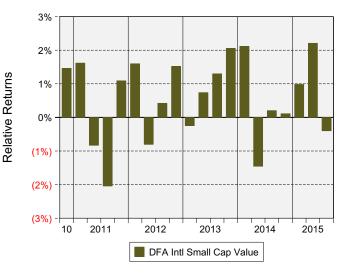
## **Quarterly Asset Growth**

Beginning Market Value	\$79,282,009
Net New Investment	\$0
Investment Gains/(Losses)	\$-7,307,960
Ending Market Value	\$71,974,049

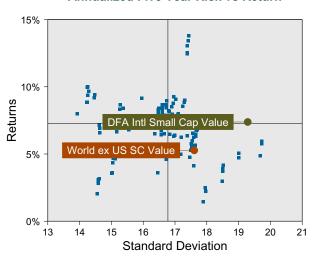
#### Performance vs MF - International Small Cap Obj (Net)



#### Relative Return vs World ex US SC Value



# MF - International Small Cap Obj (Net) Annualized Five Year Risk vs Return





# Northern Tr AM Wrld ex US Period Ended September 30, 2015

#### **Investment Philosophy**

The Fund's objective is to provide investment results that approximate the overall performance of the MSCI World ex-US Equity Index.

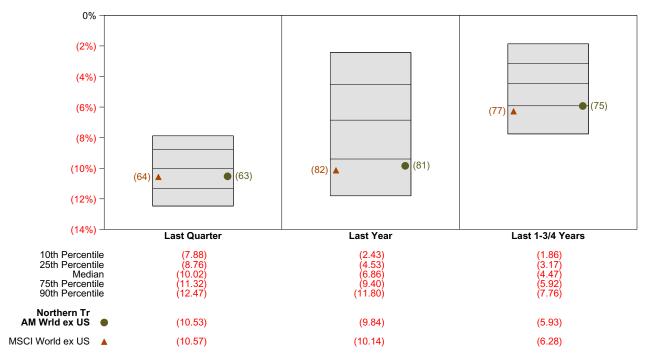
## **Quarterly Summary and Highlights**

- Northern Tr AM Wrld ex US's portfolio posted a (10.53)% return for the quarter placing it in the 63 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 81 percentile for the last year.
- Northern Tr AM Wrld ex US's portfolio outperformed the MSCI World ex US by 0.04% for the quarter and outperformed the MSCI World ex US for the year by 0.29%.

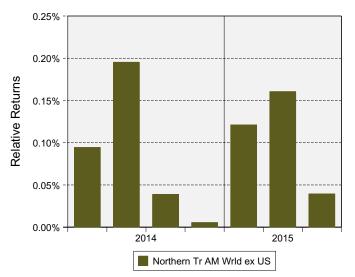
Quarterly	Asset	Growth
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Beginning Market Value	\$246,938,887
Net New Investment	\$-20,903
Investment Gains/(Losses)	\$-25,999,690
Ending Market Value	\$220,918,294

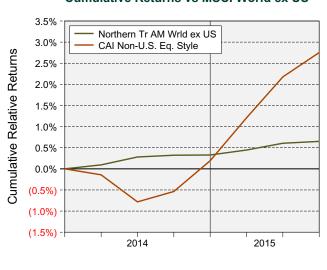
# Performance vs CAI Non-U.S. Equity Style (Gross)



### Relative Return vs MSCI World ex US



## **Cumulative Returns vs MSCI World ex US**





# Wellington Management Period Ended September 30, 2015

#### **Investment Philosophy**

The International Small Cap Opportunities investment approach is bottom-up focused, and leverages the global research resources at Wellington Management. In implementing purchase decisions, consideration is given to the size, liquidity, and volatility of these prospects. Sell decisions are based on changing fundamentals or valuations, or on finding better opportunities elsewhere. The assets are not hedged.

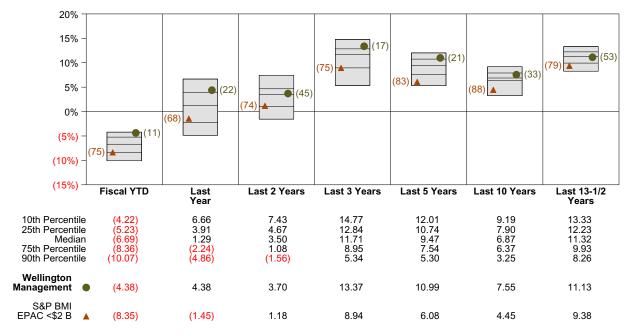
#### **Quarterly Summary and Highlights**

- Wellington Management's portfolio posted a (4.38)% return for the quarter placing it in the 11 percentile of the CAI International Small Cap Style group for the quarter and in the 22 percentile for the last year.
- Wellington Management's portfolio outperformed the S&P BMI EPAC <\$2 B by 3.98% for the quarter and outperformed the S&P BMI EPAC <\$2 B for the year by 5.83%.

## **Quarterly Asset Growth**

Beginning Market Value	\$90,139,390
Net New Investment	\$-187,005
Investment Gains/(Losses)	\$-3,935,501
Ending Market Value	\$86,016,884

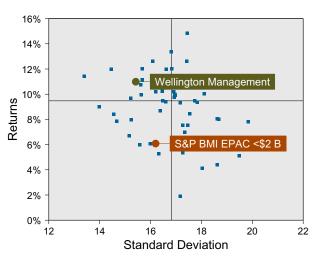
#### Performance vs CAI International Small Cap Style (Gross)



# Relative Return vs S&P BMI EPAC <\$2 B



# CAI International Small Cap Style (Gross) Annualized Five Year Risk vs Return





# Axiom Emerging Markets Period Ended September 30, 2015

#### **Investment Philosophy**

The Emerging Markets Equity strategy seeks to invest in emerging market securities issued by companies whose key business drivers are both improving and exceeding expectations, as determined by Axiom's stock selection techniques focused on fundamental company analysis. The strategy considers companies either (i) located in countries that are not included in the MSCI Developed Markets Index series or (ii) that derive a majority of their revenues or assets from a country or countries not included in the MSCI Developed Markets Index series, in each case at the time of investment. Although the Manager generally expects the strategy's investment portfolio to be geographically diverse, there are no prescribed limits on geographic distribution of the strategy's investments and the strategy has the authority to invest in securities traded in securities markets or any country in the world.

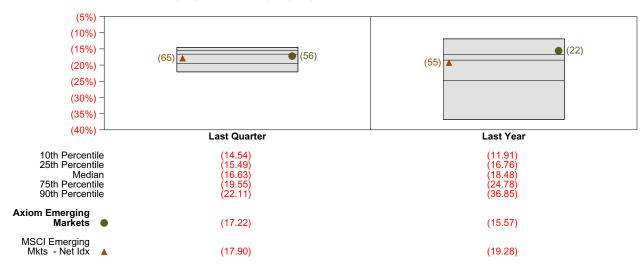
#### **Quarterly Summary and Highlights**

- Axiom Emerging Markets's portfolio posted a (17.22)% return for the quarter placing it in the 56 percentile of the CAI MF - Emerging Markets Style group for the quarter and in the 22 percentile for the last year.
- Axiom Emerging Markets's portfolio outperformed the MSCI Emerging Mkts - Net Idx by 0.68% for the quarter and outperformed the MSCI Emerging Mkts - Net Idx for the year by 3.71%.

### **Quarterly Asset Growth**

Beginning Market Value	\$117,866,297
Net New Investment	\$0
Investment Gains/(Losses)	\$-20,296,229
Ending Market Value	\$97,570,068

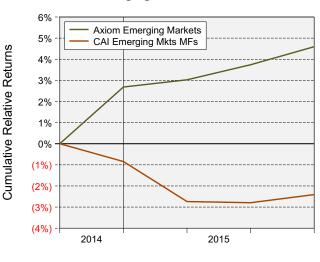
## Performance vs CAI MF - Emerging Markets Style (Net)



### Relative Returns vs MSCI Emerging Mkts - Net Idx



### Cumulative Returns vs MSCI Emerging Mkts - Net Idx





# DFA Emerging Markets Period Ended September 30, 2015

#### **Investment Philosophy**

The Emerging Markets Small Cap Portfolio invests in small cap emerging markets companies. Presently, this means investment in companies whose market capitalization is less than \$2.3 billion at the time of purchase. Dimensional considers, among other things, information disseminated by the International Finance Corporation in determining and approving emerging market countries.

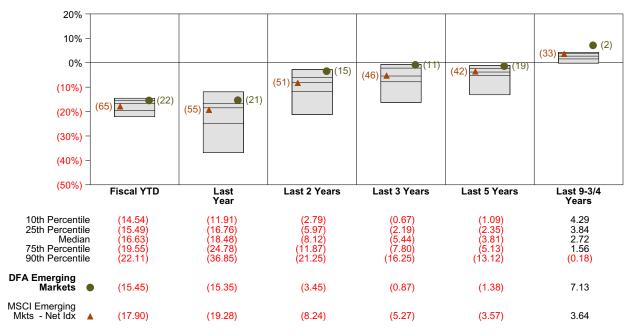
#### **Quarterly Summary and Highlights**

- DFA Emerging Markets's portfolio posted a (15.45)% return for the quarter placing it in the 22 percentile of the CAI MF -Emerging Markets Style group for the quarter and in the 21 percentile for the last year.
- DFA Emerging Markets's portfolio outperformed the MSCI Emerging Mkts - Net Idx by 2.44% for the quarter and outperformed the MSCI Emerging Mkts - Net Idx for the year by 3.93%.

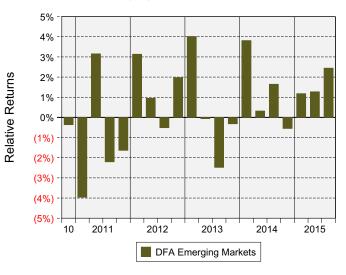
Quarterly	y Asset Growth
-----------	----------------

Beginning Market Value	\$36,467,673
Net New Investment	\$2,500,000
Investment Gains/(Losses)	\$-6,006,314
Ending Market Value	\$32,961,360

### Performance vs CAI MF - Emerging Markets Style (Net)



### Relative Returns vs MSCI Emerging Mkts - Net Idx



CAI MF - Emerging Markets Style (Net)
Annualized Five Year Risk vs Return





# EPOCH Investment Period Ended September 30, 2015

#### **Investment Philosophy**

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm. The EPOCH Blended Benchmark consists of the S&P 500 Index through 12/31/2011 and the MSCI World Index thereafter.

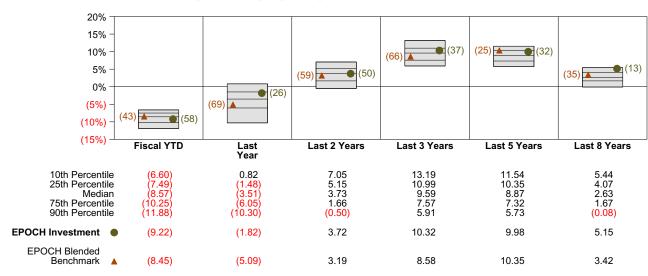
### **Quarterly Summary and Highlights**

- EPOCH Investment's portfolio posted a (9.22)% return for the quarter placing it in the 58 percentile of the CAI Global Equity Broad Style group for the quarter and in the 26 percentile for the last year.
- EPOCH Investment's portfolio underperformed the EPOCH Blended Benchmark by 0.77% for the quarter and outperformed the EPOCH Blended Benchmark for the year by 3.27%.

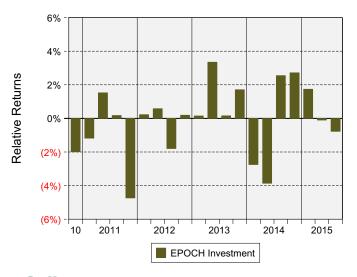
### **Quarterly Asset Growth**

Beginning Market Value	\$329,591,814
Net New Investment	\$-530,931
Investment Gains/(Losses)	\$-30,329,923
Ending Market Value	\$298,730,960

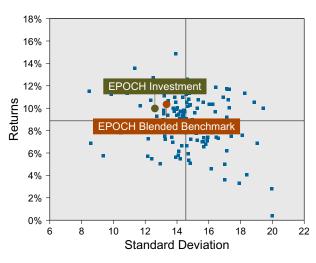
## Performance vs CAI Global Equity Broad Style (Gross)



#### Relative Returns vs EPOCH Blended Benchmark



# CAI Global Equity Broad Style (Gross) Annualized Five Year Risk vs Return





# LSV Asset Management Period Ended September 30, 2015

#### **Investment Philosophy**

The Global Value (ACWI) Equity strategy is managed using quantitative techniques to select individual securities in a risk-controlled, bottom-up approach. Value factors and security selection dominate sector/industry factors as explanators of performance.

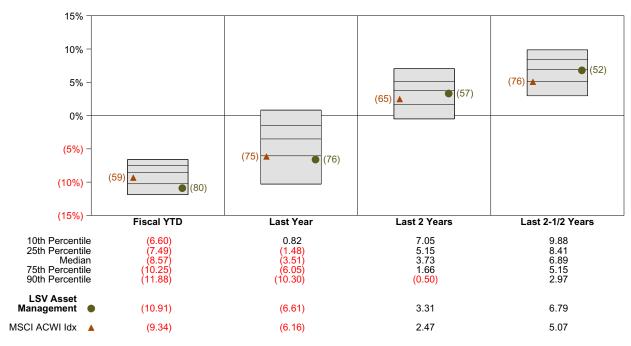
#### **Quarterly Summary and Highlights**

- LSV Asset Management's portfolio posted a (10.91)% return for the quarter placing it in the 80 percentile of the CAI Global Equity Broad Style group for the quarter and in the 76 percentile for the last year.
- LSV Asset Management's portfolio underperformed the MSCI ACWI ldx by 1.57% for the quarter and underperformed the MSCI ACWI ldx for the year by 0.45%.

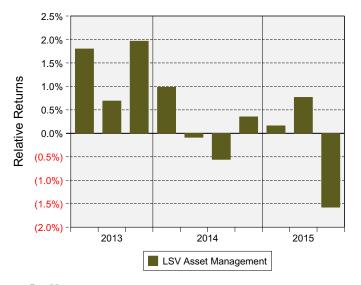
#### **Quarterly Asset Growth**

Beginning Market Value	\$431,058,260
Net New Investment	\$-3,331,527
Investment Gains/(Losses)	\$-46,707,376
Ending Market Value	\$381.019.357

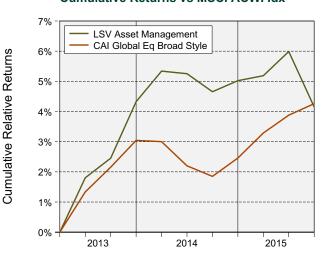
# Performance vs CAI Global Equity Broad Style (Gross)



## **Relative Return vs MSCI ACWI Idx**



## **Cumulative Returns vs MSCI ACWI Idx**





# **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

	Last	Last	Last 3	Last 5	Last 26-1/2
	Quarter	Year	Years	Years	Years
Private Equity	0.18%	(6.64%)	1.44%	4.50%	8.44%
Adams Street Direct Co-Invest Fd	1.22%	23.99%	18.03%	16.66%	-
Adams Street Direct Fd 2010	4.25%	8.91%	14.99%	11.62%	-
Adams Street 1998 Partnership	0.77%	(0.42%)	5.34%	2.35%	-
Adams Street 1999 Partnership	0.00%	(15.44%)	0.69%	4.91%	-
Adams Street 2000 Partnership	0.00%	(7.15%)	(0.02%)	5.44%	-
Adams Street 2001 Partnership	(3.81%)	(2.25%)	8.89%	9.39%	-
Adams Street 2002 Partnership	0.00%	(15.20%)	0.84%	7.59%	-
Adams Street 2003 Partnership	0.00%	13.43%	16.77%	11.95%	-
Adams Street 2010 Partnership	0.00%	18.37%	14.62%	13.36%	-
Adams Street 2008 Fund	0.00%	7.59%	10.92%	9.84%	-
Adams Street 1999 Non-US	0.00%	(12.35%)	2.35%	13.23%	-
Adams Street 2000 Non-US	0.00%	(3.36%)	(0.40%)	4.13%	-
Adams Street 2001 Non-US	48.10%	59.65%	37.56%	20.01%	-
Adams Street 2002 Non-US	(0.23%)	(9.60%)	1.04%	5.64%	-
Adams Street 2003 Non-US	0.00%	(5.76%)	12.19%	15.20%	-
Adams Street 2004 Non-US	0.00%	(6.43%)	11.33%	9.97%	-
Adams Street 2010 Non-US	0.00%	(2.43%)	6.12%	3.01%	-
Adams Street 2010 NonUS Emg	0.00%	16.39%	6.54%	-	-
Adams Street BVCF IV Fund	0.00%	1.39%	30.67%	59.66%	-
CorsAir III	(0.42%)	(8.77%)	(6.57%)	(2.85%)	_
ND Investors	(0.23%)	(5.27%)	0.37%	1.17%	-
CorsAir IV	(0.65%)	30.87%	17.96%	5.37%	-
Capital International V	(0.28%)	(13.32%)	(4.74%)	3.46%	-
Capital International VI	(1.10%)	(21.66%)	(16.43%)	-	-
EIG Energy Fund XIV	0.64%	(23.29%)	`(9.98%)	(2.66%)	-
Lewis & Clark	0.00%	(32.09%)	(13.56%)	(5.81%)	-
Lewis & Clark II	0.00%	(14.35%)	(8.65%)	(7.39%)	-
Quantum Energy Partners	0.00%	(28.27%)	8.78%	15.35%	_
Quantum Resources	53.88%	(12.39%)	(6.33%)	14.03%	-
Matlin Patterson I	0.00%	0.00%	(1.23%)	638.01%	-
Matlin Patterson II	(0.00%)	19.60%	(3.46%)	(36.19%)	-
Matlin Patterson III	(0.40%)	(2.68%)	8.29%	23.83%	-
Russell 1000 Index	(6.83%)	(0.61%)	12.66%	13.42%	9.83%
Russell 2000 Index	(11.92%)	1.25%	11.02%	11.73%	9.15%



# Declaration Total Return Period Ended September 30, 2015

#### **Investment Philosophy**

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

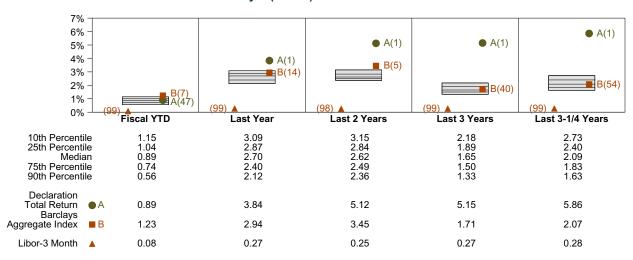
## **Quarterly Summary and Highlights**

- Declaration Total Return's portfolio posted a 0.89% return for the quarter placing it in the 47 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 0.81% for the quarter and outperformed the Libor-3 Month for the year by 3.57%.

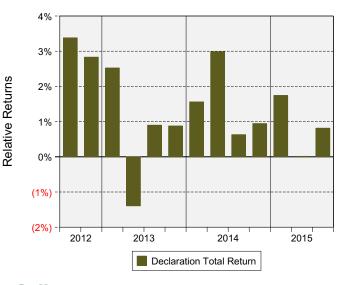
## **Quarterly Asset Growth**

Beginning Market Value	\$84,489,780
Net New Investment	\$-29,684
Investment Gains/(Losses)	\$754,378
Ending Market Value	\$85 214 474

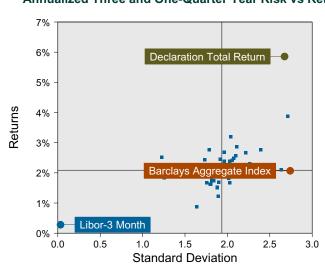
#### Performance vs CAI Intermediate Fixed-Inc Style (Gross)



### Relative Return vs Libor-3 Month



# CAI Intermediate Fixed-Inc Style (Gross) Annualized Three and One-Quarter Year Risk vs Return





# J.P. Morgan MBS Period Ended September 30, 2015

#### **Investment Philosophy**

JP Morgan seeks to outperform the benchmark over longer horizons regardless of the market environment.

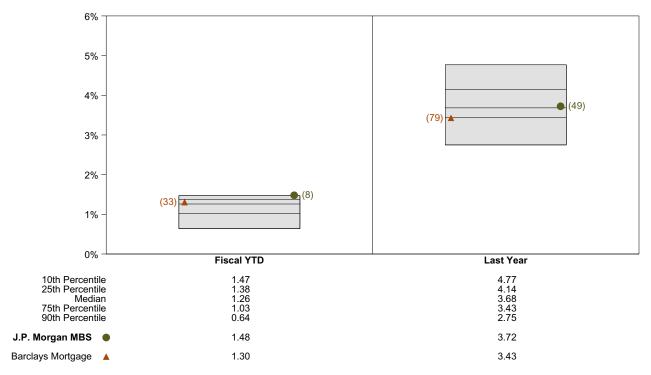
## **Quarterly Summary and Highlights**

- J.P. Morgan MBS's portfolio posted a 1.48% return for the quarter placing it in the 8 percentile of the CAI Mtg-Backed FI Style group for the quarter and in the 49 percentile for the last year.
- J.P. Morgan MBS's portfolio outperformed the Barclays Mortgage by 0.18% for the quarter and outperformed the Barclays Mortgage for the year by 0.29%.

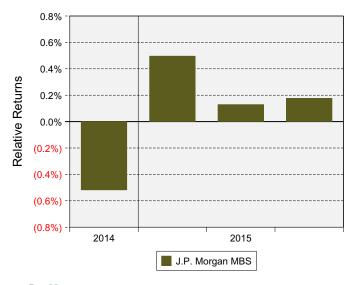
## **Quarterly Asset Growth**

Beginning Market Value	\$124,349,721
Net New Investment	\$-126,541
Investment Gains/(Losses)	\$1,839,028
Ending Market Value	\$126 062 208

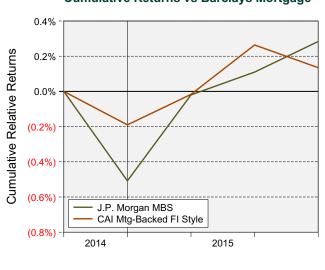
# Performance vs CAI Mtg-Backed FI Style (Gross)



### Relative Return vs Barclays Mortgage



## **Cumulative Returns vs Barclays Mortgage**





# PIMCO DISCO II Period Ended September 30, 2015

#### **Investment Philosophy**

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

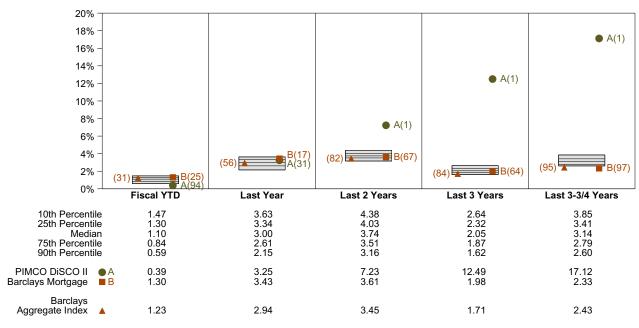
## **Quarterly Summary and Highlights**

- PIMCO DiSCO II's portfolio posted a 0.39% return for the quarter placing it in the 94 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 31 percentile for the last year.
- PIMCO DiSCO II's portfolio underperformed the Barclays Aggregate Index by 0.84% for the quarter and outperformed the Barclays Aggregate Index for the year by 0.31%.

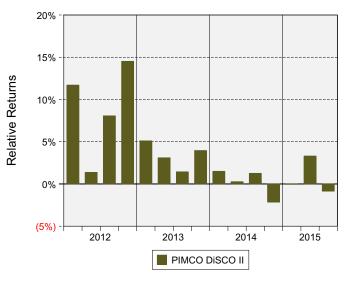
## **Quarterly Asset Growth**

Beginning Market Value	\$87,857,199
Net New Investment	\$0
Investment Gains/(Losses)	\$342,808
Ending Market Value	\$88.200.007

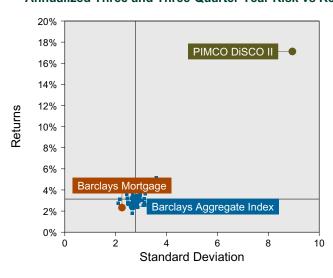
## Performance vs CAI Core Bond Fixed-Inc Style (Gross)



### Relative Return vs Barclays Aggregate Index



# CAI Core Bond Fixed-Inc Style (Gross) Annualized Three and Three-Quarter Year Risk vs Return





## **PIMCO MBS**

# Period Ended September 30, 2015

#### **Investment Philosophy**

The PIMCO Mortgage-Backed Securities Strategy is an actively managed bond portfolio that invests in high quality, short to intermediate duration mortgage-backed securities. The fund invests primarily in securities that are highly rated, such as US Government guaranteed Ginnie Mae securities and Agency-guaranteed Fannie Mae and Freddie Mac mortgage-backed securities.

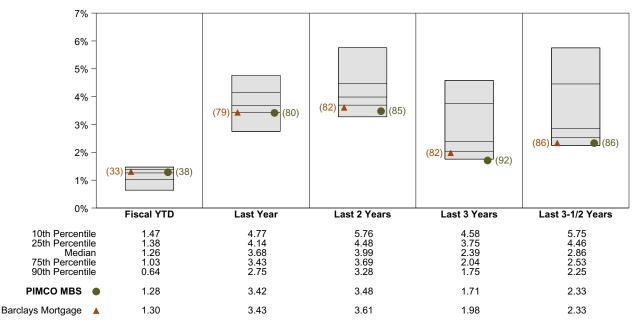
#### **Quarterly Summary and Highlights**

- PIMCO MBS's portfolio posted a 1.28% return for the quarter placing it in the 38 percentile of the CAI Mtg-Backed FI Style group for the quarter and in the 80 percentile for the last year.
- PIMCO MBS's portfolio underperformed the Barclays Mortgage by 0.02% for the quarter and underperformed the Barclays Mortgage for the year by 0.01%.

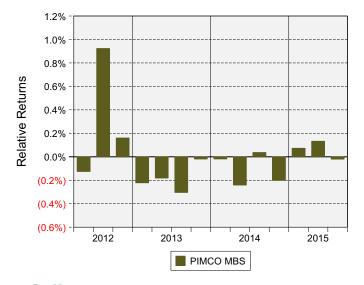
## **Quarterly Asset Growth**

Beginning Market Value	\$179,199,778
Net New Investment	\$-75,015
Investment Gains/(Losses)	\$2,299,558
Ending Market Value	\$181,424,321

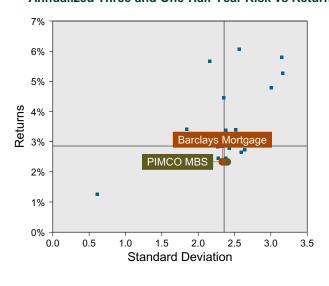
## Performance vs CAI Mtg-Backed FI Style (Gross)



## Relative Return vs Barclays Mortgage



# CAI Mtg-Backed FI Style (Gross) Annualized Three and One-Half Year Risk vs Return





# PIMCO Unconstrained Period Ended September 30, 2015

#### **Investment Philosophy**

The PIMCO Unconstrained Bond Strategy is an absolute return-oriented, investment grade quality fixed income strategy that leverages PIMCO's secular thinking, global themes, and integrated investment process without the constraints of a benchmark or significant sector/instrument limitations. The strategy focuses on long-term economic, social and political trends. Over shorter cyclical time frames, the unconstrained nature of the strategy allows PIMCO to take on more risk when tactical opportunities are identified, and it allows for reduction and diversification of risk at times when the outlook may be more challenging for traditional fixed income benchmarks. The product changed from Commingled Fund to Separate Account in March 2014. \*Libor-3 month through February 28, 2014; Fund's performance through March 31, 2014; Libor-3 month thereafter.

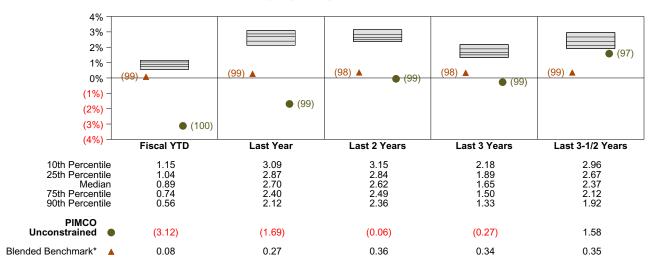
#### **Quarterly Summary and Highlights**

- PIMCO Unconstrained's portfolio posted a (3.12)% return for the quarter placing it in the 100 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 99 percentile for the last year.
- PIMCO Unconstrained's portfolio underperformed the Blended Benchmark\* by 3.20% for the quarter and underperformed the Blended Benchmark\* for the year by 1.96%.

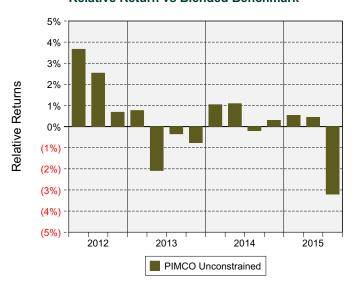
Quarterly	Asset	Growth
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Beginning Market Value	\$94,940,192
Net New Investment	\$-47,699
Investment Gains/(Losses)	\$-2,960,606
Ending Market Value	\$91,931,887

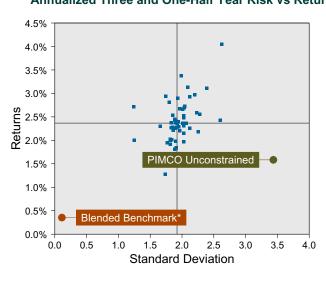
## Performance vs CAI Intermediate Fixed-Inc Style (Gross)



## Relative Return vs Blended Benchmark\*



# CAI Intermediate Fixed-Inc Style (Gross) Annualized Three and One-Half Year Risk vs Return





# SSgA Long US Treas Index Period Ended September 30, 2015

#### **Investment Philosophy**

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Long Treasury Bond Index over the long term.

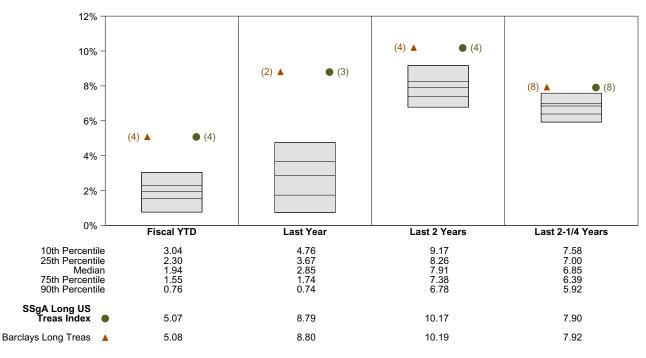
## **Quarterly Summary and Highlights**

- SSgA Long US Treas Index's portfolio posted a 5.07% return for the quarter placing it in the 4 percentile of the CAI Extended Maturity Fixed-Inc Style group for the quarter and in the 3 percentile for the last year.
- SSgA Long US Treas Index's portfolio underperformed the Barclays Long Treas by 0.00% for the quarter and underperformed the Barclays Long Treas for the year by 0.01%.

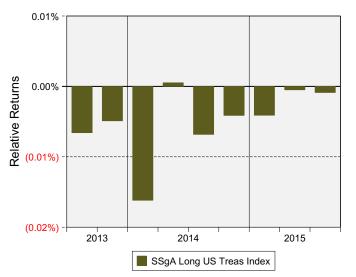
Quarterly A	set Growth	
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Beginning Market Value	\$88,438,348
Net New Investment	\$-7,733
Investment Gains/(Losses)	\$4,487,969
Ending Market Value	\$92,918,584

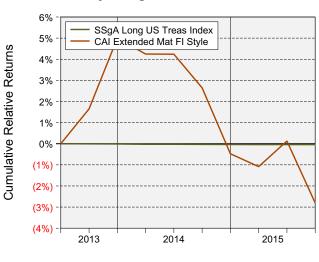
## Performance vs CAI Extended Maturity Fixed-Inc Style (Gross)



### Relative Return vs Barclays Long Treas



#### Cumulative Returns vs Barclays Long Treas





# **Goldman Sachs 2006 Offshore** Period Ended September 30, 2015

#### **Investment Philosophy**

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

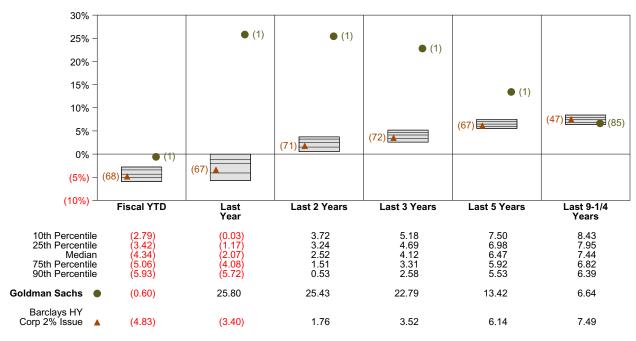
## **Quarterly Summary and Highlights**

- Goldman Sachs's portfolio posted a (0.60)% return for the quarter placing it in the 1 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- Goldman Sachs's portfolio outperformed the Barclays HY Corp 2% Issue by 4.23% for the guarter and outperformed the Barclays HY Corp 2% Issue for the year by 29.20%.

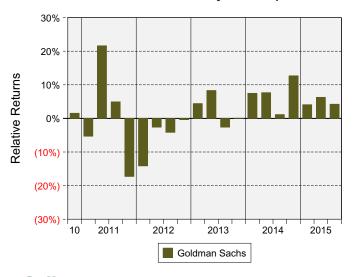
#### **Quarterly Asset Growth**

Beginning Market Value	\$1,560,000
Net New Investment	\$-139,870
Investment Gains/(Losses)	\$-9,213
Ending Market Value	\$1,410,917

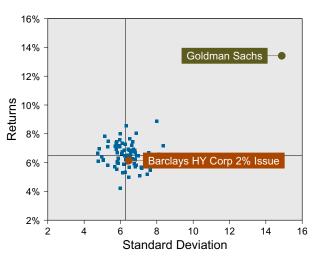
## Performance vs CAI High Yield Fixed-Inc Style (Gross)



#### Relative Return vs Barclays HY Corp 2% Issue



#### CAI High Yield Fixed-Inc Style (Gross) **Annualized Five Year Risk vs Return**





# Goldman Sachs Offshore Fund V Period Ended September 30, 2015

#### **Investment Philosophy**

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

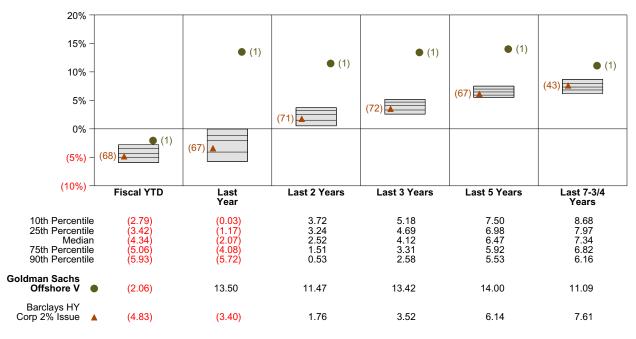
#### **Quarterly Summary and Highlights**

- Goldman Sachs Offshore V's portfolio posted a (2.06)% return for the quarter placing it in the 1 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- Goldman Sachs Offshore V's portfolio outperformed the Barclays HY Corp 2% Issue by 2.77% for the guarter and outperformed the Barclays HY Corp 2% Issue for the year by 16.90%.

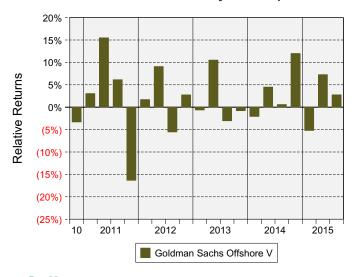
#### **Quarterly Asset Growth**

Beginning Market Value	\$3,930,000
Net New Investment	\$-928,751
Investment Gains/(Losses)	\$-79,478
Ending Market Value	\$2 921 771

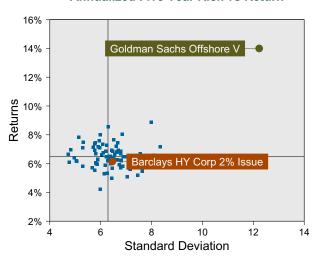
#### Performance vs CAI High Yield Fixed-Inc Style (Gross)



#### Relative Return vs Barclays HY Corp 2% Issue



#### **CAI High Yield Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return**





# **Loomis Sayles** Period Ended September 30, 2015

#### **Investment Philosophy**

The High Yield Full Discretion Strategy seeks to identify attractive sectors and specific investment opportunities primarily within the global fixed income market through a global economic and interest rate framework. Portfolio managers incorporate a long-term macroeconomic view along with a stringent bottom-up investment evaluation process that drives security selection and resulting sector allocations. Opportunistic investments in non-benchmark sectors including investment grade corporate, emerging market, and non-US dollar debt and convertible bonds help to manage overall portfolio risk and enhance total return potential.

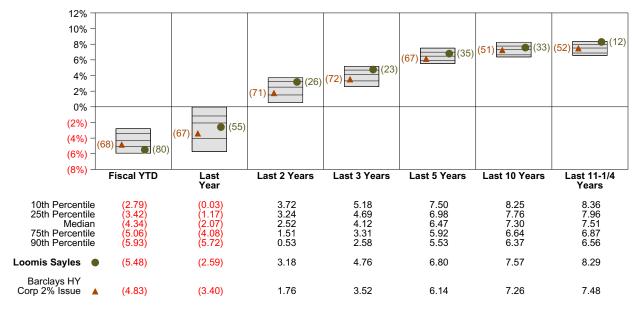
#### **Quarterly Summary and Highlights**

- Loomis Sayles's portfolio posted a (5.48)% return for the quarter placing it in the 80 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 55 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Barclays HY Corp 2% Issue by 0.65% for the guarter and outperformed the Barclays HY Corp 2% Issue for the year by 0.81%.

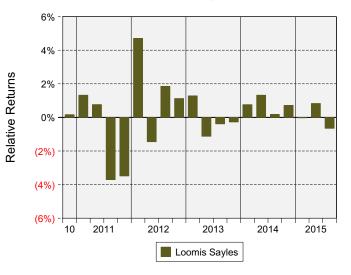
Quarterly	v Asset	Growth
audi toii	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.0111.

Beginning Market Value	\$227,990,933
Net New Investment	\$-284,989
Investment Gains/(Losses)	\$-12,488,904
Ending Market Value	\$215,217,040

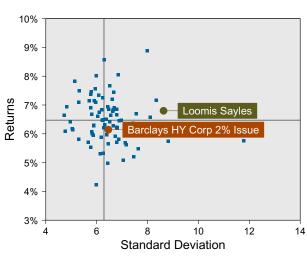
## Performance vs CAI High Yield Fixed-Inc Style (Gross)



#### Relative Return vs Barclays HY Corp 2% Issue



#### CAI High Yield Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return





# PIMCO Bravo II Fund Period Ended September 30, 2015

#### **Investment Philosophy**

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

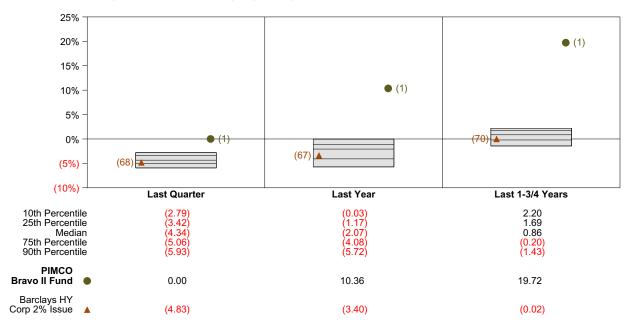
#### **Quarterly Summary and Highlights**

- PIMCO Bravo II Fund's portfolio posted a 0.00% return for the quarter placing it in the 1 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- PIMCO Bravo II Fund's portfolio outperformed the Barclays HY Corp 2% Issue by 4.83% for the quarter and outperformed the Barclays HY Corp 2% Issue for the year by 13.76%.

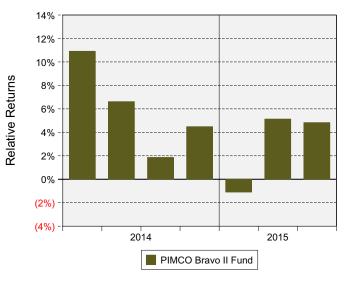
Quarterly	Asset	Growth
-----------	-------	--------

Beginning Market Value	\$35,384,594
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$35,384,594

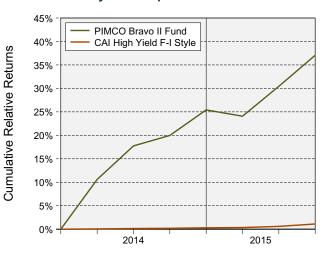
# Performance vs CAI High Yield Fixed-Inc Style (Gross)



### Relative Return vs Barclays HY Corp 2% Issue



#### Cumulative Returns vs Barclays HY Corp 2% Issue





# **Brandywine Asset Management** Period Ended September 30, 2015

#### **Investment Philosophy**

Brandywine engages in a disciplined, active, value-driven, strategic approach. Their investment strategy concentrates on top-down analysis of macro-economic conditions in order to determine where the most attractive valuations exist. Specifically, they invest in bonds with the highest real yields globally. They manage currency to protect principal and increase returns, patiently rotated among countries and attempt to control risk by purchasing undervalued securities.

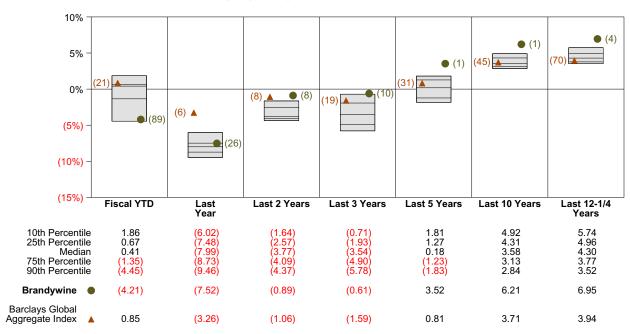
#### **Quarterly Summary and Highlights**

- Brandywine's portfolio posted a (4.21)% return for the quarter placing it in the 89 percentile of the CAI Non-U.S. Fixed-Inc Style group for the quarter and in the 26 percentile for the last year.
- Brandywine's portfolio underperformed the Barclays Global Aggregate Index by 5.06% for the guarter and underperformed the Barclays Global Aggregate Index for the year by 4.25%.

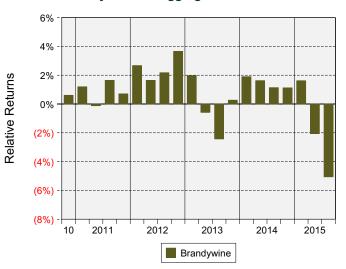
### **Quarterly Asset Growth**

Beginning Market Value	\$130,543,858
Net New Investment	\$-125,243
Investment Gains/(Losses)	\$-5,488,249
Ending Market Value	\$124,930,365

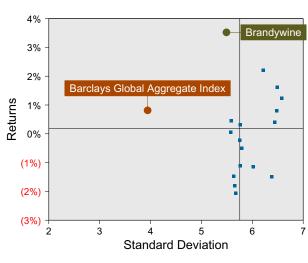
#### Performance vs CAI Non-U.S. Fixed-Inc Style (Gross)



### Relative Returns vs **Barclays Global Aggregate Index**



#### CAI Non-U.S. Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return





# **UBS Global Asset Management** Period Ended September 30, 2015

#### **Investment Philosophy**

UBS Global Asset Management's non-US fixed income portfolio's assets are invested in emerging markets debt on an opportunistic basis up to the stated maximum allocation of 5%. The account's non-US fixed income assets will be fully-invested at all times, but such assets may be invested in the UBS US Cash Management Prime Collective Fund for operational and risk management purposes. \*Citigroup Non-US Govt Index through 12/31/2009 and the Barclays Global Aggregate ex-US Index thereafter.

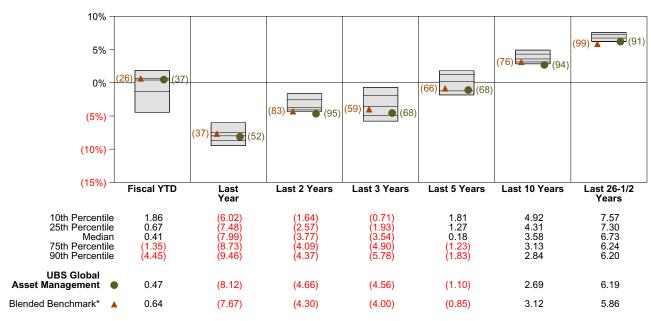
#### **Quarterly Summary and Highlights**

- UBS Global Asset Management's portfolio posted a 0.47% return for the quarter placing it in the 37 percentile of the CAI Non-U.S. Fixed-Inc Style group for the quarter and in the 52 percentile for the last year.
- UBS Global Asset Management's portfolio underperformed the Blended Benchmark\* by 0.17% for the guarter and underperformed the Blended Benchmark\* for the year by 0.45%.

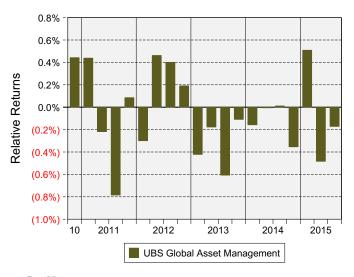
#### **Quarterly Asset Growth**

Beginning Market Value	\$99,366,592
Net New Investment	\$-81,972
Investment Gains/(Losses)	\$465,259
Ending Market Value	\$99,749,879

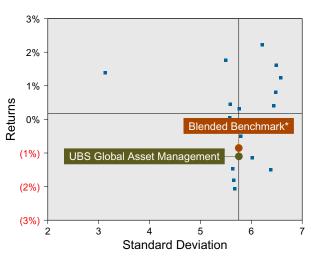
### Performance vs CAI Non-U.S. Fixed-Inc Style (Gross)



#### Relative Return vs Blended Benchmark\*



#### CAI Non-U.S. Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return

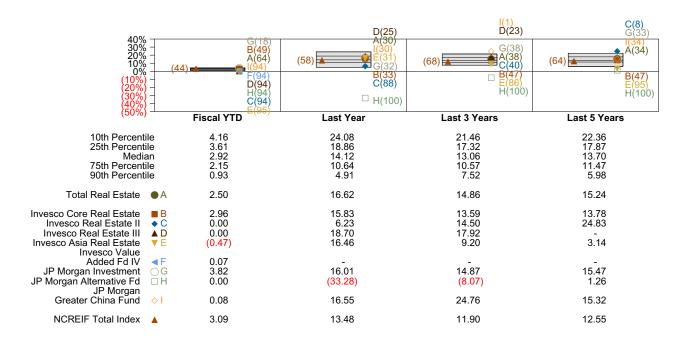


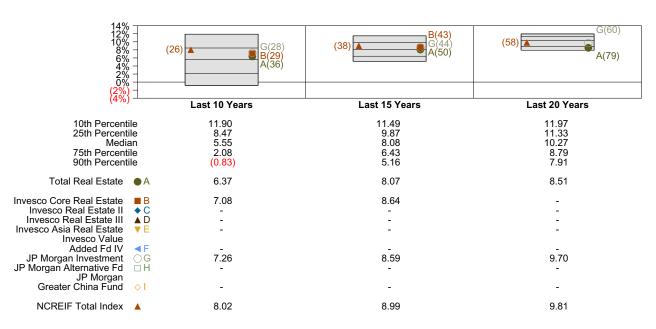


# North Dakota State Investment Board Pension Funds Performance vs Total Real Estate DB Periods Ended September 30, 2015

#### **Return Ranking**

The chart below illustrates fund rankings over various periods versus the Total Real Estate DB. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Total Real Estate DB. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.







# **TIR Teredo** Period Ended September 30, 2015

#### **Investment Philosophy**

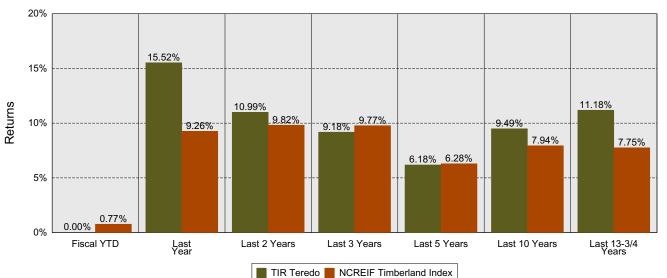
Teredo Timber LLC - The investment objective of Teredo is to provide competitive investment returns from increasing saw timber production through the 20 year term of the partnership. TIR's management strategy is to maximize saw timber volume by applying intensive forest management techniques which accelerate growth through the diameter class distribution. Periodic cash flows are produced from thinning and final harvests of the individual timber stands.

#### **Quarterly Summary and Highlights**

- TIR Teredo's portfolio posted a 0.00% return for the quarter placing it in the 100 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- TIR Teredo's portfolio underperformed the NCREIF Timberland Index by 0.77% for the guarter and outperformed the NCREIF Timberland Index for the year by 6.26%.

Quarterly Asset Growth		
Beginning Market Value	\$60,894,655	
Net New Investment	\$0	
Investment Gains/(Losses)	\$0	

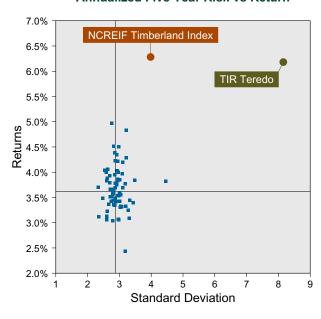
**Ending Market Value** \$60,894,655



#### Relative Return vs NCREIF Timberland Index



## CAI Core Bond Fixed-Inc Style (Gross) **Annualized Five Year Risk vs Return**





# **TIR Springbank** Period Ended September 30, 2015

#### **Investment Philosophy**

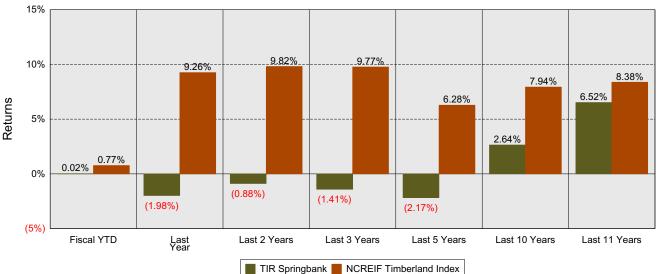
Springbank LLC - The investment objective of Springbank is to maximize long-term investment potential by means of the formation of a dedicated land management group, intensive timber management to increase timber production, the coordination of timber harvesting with land management activities and direct marketing and selective real estate partnerships.

#### **Quarterly Summary and Highlights**

- TIR Springbank's portfolio posted a 0.02% return for the quarter placing it in the 100 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 100 percentile for the last year.
- TIR Springbank's portfolio underperformed the NCREIF Timberland Index by 0.75% for the quarter and underperformed the NCREIF Timberland Index for the year by 11.24%.

### **Quarterly Asset Growth**

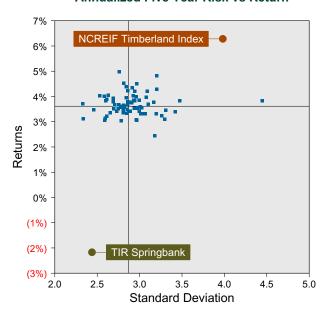
Beginning Market Value	\$116,504,483
Net New Investment	\$-25,232
Investment Gains/(Losses)	\$25,232
Ending Market Value	\$116,504,483



#### Relative Return vs NCREIF Timberland Index

# 4% 2% Relative Returns 0% (2%) (4%)(6%)2012 2013 2011 2014 2015 ■ TIR Springbank

## CAI Core Bond Fixed-Inc Style (Gross) **Annualized Five Year Risk vs Return**





# JP Morgan Asian Infrastructure Period Ended September 30, 2015

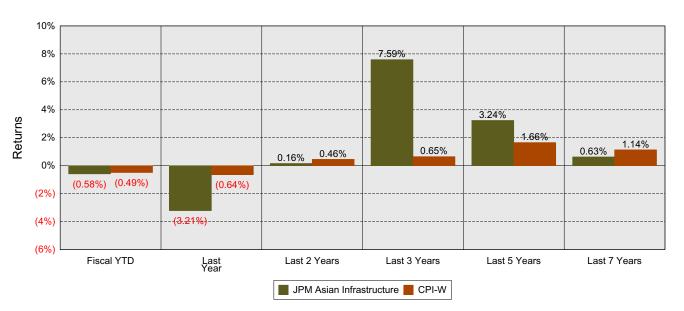
#### **Investment Philosophy**

The JPMorgan Asian Infrastructure & Related Resources Opportunity ("AIRRO") Fund seeks to invest in infrastructure and related resources opportunities across the greater Asia Pacific region. The Fund seeks to invest in a broad range of assets, including: core infrastructure, power both from conventional and renewable sources, communications, water and waste-water, public works, urban development and other "social" infrastructure assets and related resources.

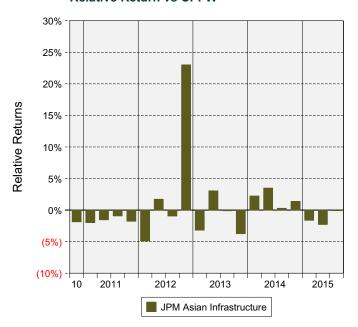
#### **Quarterly Summary and Highlights**

• JPM Asian Infrastructure's portfolio underperformed the CPI-W by 0.09% for the quarter and underperformed the CPI-W for the year by 2.57%.

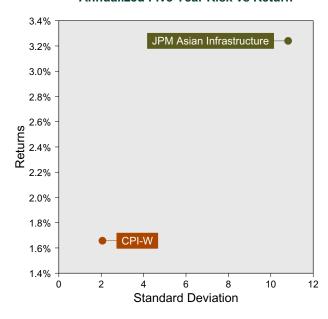
Beginning Market Value	\$30,600,000
Net New Investment	\$179,342
Investment Gains/(Losses)	\$-179,342
Ending Market Value	\$30,600,000



#### Relative Return vs CPI-W



#### Annualized Five Year Risk vs Return





# JPM Infrastructure Fund Period Ended September 30, 2015

#### **Investment Philosophy**

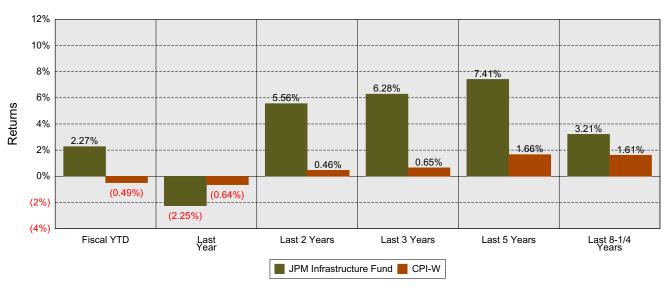
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

#### **Quarterly Summary and Highlights**

 JPM Infrastructure Fund's portfolio outperformed the CPI-W by 2.76% for the quarter and underperformed the CPI-W for the year by 1.61%.

#### **Quarterly Asset Growth**

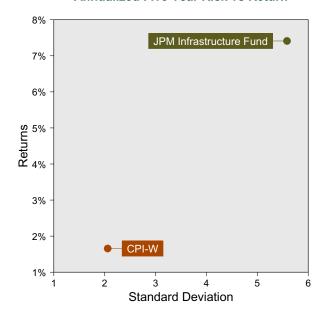
Beginning Market Value	\$137,120,438
Net New Investment	\$-380,848
Investment Gains/(Losses)	\$3,110,431
Ending Market Value	\$139.850.021



#### Relative Return vs CPI-W

# 8% 6% 4% Relative Returns 2% 0% (2%)(4%)2012 2013 2014 2015 2011 JPM Infrastructure Fund

#### Annualized Five Year Risk vs Return





# **Grosvenor Cust. Infrastructure** Period Ended September 30, 2015

#### **Investment Philosophy**

The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

#### **Quarterly Summary and Highlights**

• Grosvenor Cust. Infrastructure's portfolio outperformed the CPI-W by 0.31% for the quarter and outperformed the CPI-W for the year by 5.98%.

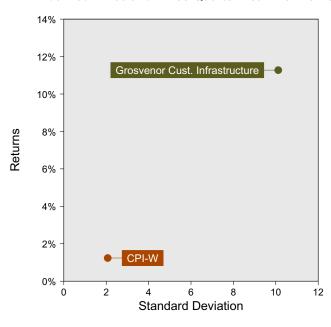
Quarterly Asset Growth		
Beginning Market Value	\$39,011,198	
Net New Investment	\$1,080,436	
Investment Gains/(Losses)	\$-71,402	
Ending Market Value	\$40,020,232	



#### Relative Return vs CPI-W

# 20% 15% Relative Returns 10% 5% (5%)2012 2013 2014 2015 Grosvenor Cust. Infrastructure

#### **Annualized Three and Three-Quarter Year Risk vs Return**





# **Grosvenor Cust. Infrastructure II** Period Ended September 30, 2015

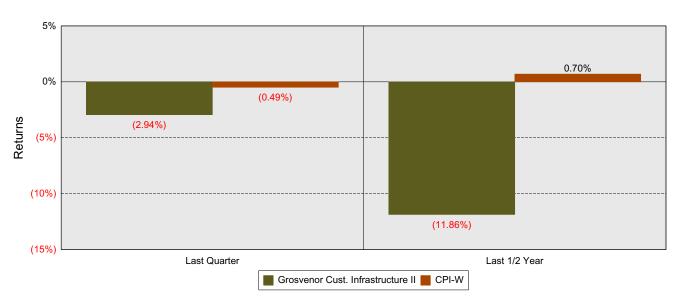
#### **Investment Philosophy**

The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

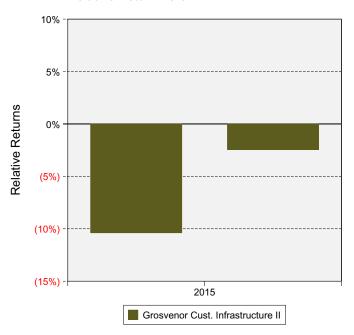
#### **Quarterly Summary and Highlights**

• Grosvenor Cust. Infrastructure II's portfolio underperformed the CPI-W by 2.45% for the quarter and underperformed the CPI-W for the one-half year by 12.56%.

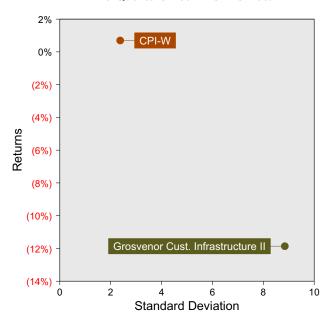
Quarterly Asset Growth		
Beginning Market Value	\$1,530,085	
Net New Investment	\$2,923,309	
Investment Gains/(Losses)	\$-94,204	
Ending Market Value	\$4,359,190	



#### Relative Return vs CPI-W



#### Two Quarters Year Risk vs Return





# **Research and Educational Programs**

The Callan Investments Institute provides research that keeps clients updated on the latest industry trends while helping them learn through carefully structured educational programs.

#### **Recent Research**

Please visit www.callan.com/research to see all of our publications.

**Fixed Income Benchmark Review** This annual report compares characteristics for Barclays, Citi, Credit Suisse, and JP Morgan fixed income indices versus various Callan Manager peer groups.

Real Indicators: The Metrics of Real Estate In this video, Avery Robinson, CAIA, discusses the development of real estate indicator metrics and what they say about the current market.

The Education of Beta Video Eugene Podkaminer, CFA, describes the reasons he decided to explore the topic of "smart beta".



The Education of Beta: Can Alternative Indexes Make Your Portfolio Smarter? Reprinted in the Journal of Investing, Eugene Podkaminer explores how "smart beta" strategies are put together, how they have performed over the past decade, and how they can be used by investors.

Real Assets Reporter, Summer/Fall 2015 Data and insights on real estate and other real asset investment topics, including listed infrastructure.

**Target Date Funds: Finding the Right Vehicle for the Road to Retirement** Author Jimmy Veneruso presents key findings and highlights some questions plan sponsors may consider when evaluating target date funds.

**Hedge Fund Monitor, 2nd Quarter 2015** Author Jim McKee's essay, Zen and the Art of Selling Short, including quarterly performance provides a snapshot of the asset class.

**Private Markets Trends, Summer 2015** Gary Robertson summarizes the market environment, recent events, performance, and other issues involving private equity.

**DC Observer, 2nd Quarter 2015** Cover story: What Do *You* See Through the Brokerage Window? Plus the Callan DC Index™.

Summary, June Workshop: Fiduciary Tidal Wave, Navigating DC's Uncharted Waters Shared observations from Callan's 2015 DC Trends Survey, client experiences, and case studies.

**Capital Market Review, 2nd Quarter 2015** Insights on the economy and recent performance in equities, fixed income, alternatives, real estate, and more.

**Inside Callan's Database, 2nd Quarter 2015** This report graphs performance and risk data from Callan's proprietary database alongside relevant market indices.



Beating the Heat: Five Best Practices for Endowments and Foundations Ellen Brownell presents five ways endowments and foundations can keep their cool when asset allocation conversations heat up.

**2015 Nuclear Decommissioning Funding Study** Author Julia Moriarty covers power utilities with an ownership interest in the operating and non-operating nuclear reactors in the U.S.

#### **Events**

Did you miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: https://www.callan.com/education/CII/



The October Regional Workshop, to be held October 21 in New York and October 22 in Atlanta, looks at where Real Assets Meet the Real World. In this workshop, we look at real assets' various roles in institu-

tional portfolios. We dive into the challenges that arise during implementation—challenges as unique as investors themselves.

Also, save the date for our annual **National Conference** in San Francisco, January 25-27, 2016.

For more information about research or educational events, please contact Anna West: 415.974.5060 / institute@callan.com

# The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the "Callan College," provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next session is:

#### Introduction to Investments

Chicago, October 27-28, 2015 2016 dates TBD, please check our website for updates

This session familiarizes fund sponsor trustees, staff, and asset management advisors with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with asset-management oversight and/or support responsibilities. Tuition for the Introductory "Callan College" session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

#### **Customized Sessions**

The "Callan College" is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

Learn more at https://www.callan.com/education/college/ or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

# **Education: By the Numbers**

**500** 

Attendees (on average) of the Institute's annual National Conference

**50**+

Unique pieces of research the Institute generates each year

3,300

Total attendees of the "Callan College" since 1994

1980

Year the Callan Investments Institute was founded



"We think the best way to learn something is to teach it.

Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years."

Ron Peyton, Chairman and CEO

# Callan



# List of Managers That Do Business with Callan Associates Inc.

Confidential - For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. The list below is compiled and updated quarterly because we believe our fund sponsor clients should have a clear understanding of the investment management organizations that do business with our firm. As of 09/30/15. Callan provided educational, consulting, software, database, or reporting services to this list of managers through one or more of the following business units: Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting. Given the complex corporate and organizational ownership structures of investment management firms, parent and affiliate firm relationships are not listed here. The client list below may include names of parent companies who allow their affiliates to use some of the services included in their client contract (eg, educational services including published research and attendance at conferences and workshops). Affiliates will not be listed if they don't separately contract with Callan. Per strict policy these manager relationships do not affect the outcome or process by which any of Callan's services are conducted.

Fund sponsor clients may request a copy of this list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by the managers employed by their fund. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name	Educational Services	Consulting Services
1607 Capital Partners, LLC		Υ
Aberdeen Asset Management	Y	Υ
Acadian Asset Management, Inc.	Υ	
Advisory Research	Y	
Affiliated Managers Group		Υ
AllianceBernstein	Y	
Allianz Global Investors U.S. LLC	Υ	Υ
Allianz Life Insurance Company of North America		Υ
Altrinsic Global Advisors, LLC		Υ
American Century Investment Management	Υ	
Analytic Investors	Υ	
Apollo Global Management	Υ	
AQR Capital Management	Υ	
Ares Management	Y	
Ariel Investments	Υ	
Aristotle Capital Management	Υ	
Aronson + Johnson + Ortiz	Υ	
Artisan Holdings		Υ
Atlanta Capital Management Co., L.L.C.	Υ	Υ
Aviva Investors	Y	
AXA Rosenberg Investment Management	Υ	
Babson Capital Management LLC	Y	
Baillie Gifford International LLC	Υ	Υ
Baird Advisors	Y	Υ
Bank of America		Υ
Baring Asset Management	Y	
Baron Capital Management	Υ	
BlackRock	Y	
BMO Asset Management	Υ	
BNP Paribas Investment Partners	Y	
BNY Mellon Asset Management	Υ	Υ
Boston Company Asset Management, LLC (The)	Y	Υ

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Manager Name	Educational Services	Consulting Services
Boston Partners	Υ	Υ
Brandes Investment Partners, L.P.	Υ	Υ
Brandywine Global Investment Management, LLC	Υ	
Brown Brothers Harriman & Company	Υ	
Cadence Capital Management	Υ	
Capital Group	Υ	
CastleArk Management, LLC		Υ
Causeway Capital Management	Υ	
Central Plains Advisors, Inc.		Υ
Chartwell Investment Partners	Υ	
ClearBridge Investments, LLC (fka ClearBridge Advisors)	Υ	
Cohen & Steers	Υ	Υ
Columbia Management Investment Advisors, LLC	Υ	Υ
Columbus Circle Investors	Υ	Υ
Corbin Capital Partners	Υ	
Cornerstone Investment Partners, LLC	Y	
Cramer Rosenthal McGlynn, LLC	Y	
Crawford Investment Council		Υ
Credit Suisse Asset Management	Y	·
Crestline Investors	Y	Y
Cutwater Asset Management	Y	·
DB Advisors	Y	Υ
DE Shaw Investment Management LLC	Y	·
Delaware Investments	Y	Υ
DePrince, Race & Zollo, Inc.	Ý	Y
Deutsche Asset & Wealth Management	Y	Y
Diamond Hill Investments	Y	
Donald Smith & Co., Inc.	Y	
DSM Capital Partners		Y
Duff & Phelps Investment Mgmt.	Υ	Y
Eagle Asset Management, Inc.		Y
EARNEST Partners, LLC	Y	·
Eaton Vance Management	Y	Y
Epoch Investment Partners	Y	,
Fayez Sarofim & Company		Y
	Y	Y
Federated Investors Fir Tree Partners	Y	1
	Y	
First Louisian Bank	Y	V
First Hawaiian Bank	V	Y
First State Investments	Y	
Fisher Investments Franklin Templeton	Y	Υ

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Fred Alger Management Co., Inc.	Υ	
Fuller & Thaler Asset Management	Υ	
GAM (USA) Inc.	Υ	
Garcia Hamilton & Associates	Υ	
GE Asset Management	Υ	Υ
Geneva Capital Management	Υ	
Goldman Sachs Asset Management	Υ	Υ
Grand-Jean Capital Management	Υ	Υ
GMO (fka Grantham, Mayo, Van Otterloo & Co., LLC)	Υ	
Great Lakes Advisors, Inc.		Υ
The Guardian Life Insurance Company of America		Υ
Guggenheim Investments Asset Management (fka Security Global)	Υ	
The Hampshire Companies	Υ	
Harbor Capital		Υ
Hartford Funds	Υ	
Hartford Investment Management Co.	Υ	Y
Heightman Capital Management Corporation		Y
Henderson Global Investors	Υ	Y
Hotchkis & Wiley	Y	
HSBC Global Asset Management	Υ	
Income Research & Management	Υ	
Insight Investment Management		Y
Institutional Capital LLC	Υ	
INTECH Investment Management	Υ	
Invesco	Υ	Υ
Investec Asset Management	Υ	
Jacobs Levy Equity Management		Υ
Janus Capital Group (fka Janus Capital Management, LLC)	Υ	Υ
Jensen Investment Management		Y
J.M. Hartwell	Y	
J.P. Morgan Asset Management	Υ	Y
KeyCorp		Υ
Lazard Asset Management	Υ	Υ
LMCG Investments (fka Lee Munder Capital Group)	Υ	
Legal & General Investment Management America	Υ	
Lincoln National Corporation		Y
Logan Circle Partners, L.P.	Υ	
The London Company	Υ	
Longview Partners	Y	
Loomis, Sayles & Company, L.P.	Y	Y
Lord Abbett & Company	Υ	Y
Los Angeles Capital Management	Υ	

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LSV Asset Management	Υ	
Lyrical Partners	Υ	
MacKay Shields LLC	Υ	Υ
Man Investments	Υ	
Manulife Asset Management	Y	
Martin Currie	Υ	
Marvin & Palmer Associates, Inc.	Υ	
MFS Investment Management	Y	Υ
MidFirst Bank		Υ
Mondrian Investment Partners Limited	Y	Υ
Montag & Caldwell, Inc.	Υ	Υ
Morgan Stanley Alternative Investment Partners	Y	
Morgan Stanley Investment Management	Y	Υ
Mount Lucas Management LP	Υ	
Mountain Lake Investment Management LLC		Υ
MUFG Union Bank, N.A.		Υ
Neuberger Berman, LLC (fka, Lehman Brothers)	Υ	Υ
Newton Capital Management	Υ	
Northern Lights Capital Group		Υ
Northern Trust Global Investment Services	Υ	Υ
Nuveen Investments Institutional Services Group LLC	Υ	
Old Mutual Asset Management	Υ	Υ
OppenheimerFunds, Inc.	Υ	
Pacific Investment Management Company	Υ	
Palisade Capital Management LLC	Υ	
Paradigm Asset Management	Υ	
Parametric Portfolio Associates	Υ	
Peregrine Capital Management, Inc.	Υ	Υ
Philadelphia International Advisors, LP	Υ	
PineBridge Investments (formerly AIG)	Υ	
Pinnacle Asset Management	Υ	
Pioneer Investment Management, Inc.	Υ	
PNC Capital Advisors (fka Allegiant Asset Mgmt)	Υ	Υ
Polen Capital Management	Υ	
Principal Financial Group		Υ
Principal Global Investors	Υ	Υ
Private Advisors	Y	
Prudential Fixed Income Management	Y	
Prudential Investment Management, Inc.	Y	Y
Putnam Investments, LLC	Y	Y
Pzena Investment Management, LLC	Y	
Pyramis Global Advisors	Y	

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Rainier Investment Management	Υ	
RBC Global Asset Management (U.S.) Inc.	Υ	Υ
Research Affiliates		Υ
Regions Financial Corporation		Υ
RCM		Υ
Rothschild Asset Management, Inc.	Υ	Υ
RS Investments	Υ	
Russell Investment Management	Υ	
Sankaty Advisors, LLC	Υ	
Santander Global Facilities		Υ
Schroder Investment Management North America Inc.	Y	Υ
Scout Investments	Y	
SEI Investments		Υ
SEIX Investment Advisors, Inc.	Y	
Select Equity Group	Υ	
Smith Affiliated Capital Corporation	Y	
Smith Graham and Company		Y
Smith Group Asset Management		Y
Standard Life Investments	Y	
Standish (fka, Standish Mellon Asset Management)	Y	
State Street Global Advisors	Y	
Stone Harbor Investment Partners, L.P.	Y	Υ
Systematic Financial Management	Y	
T. Rowe Price Associates, Inc.	Y	Υ
Taplin, Canida & Habacht	Y	·
Timberland Investment Resources	Y	
TCW Asset Management Company	Y	
Thompson, Siegel & Walmsley LLC	Y	
USAA Real Estate Company	Y	
Van Eck	Y	
Versus Capital Group		Y
	Y	T
Victory Capital Management Inc.	Y	
Vontobel Asset Management	Y	
Voya Investment Management (fka ING)	Y	V
Vulcan Value Partners, LLC	V	Y
Waddell & Reed Asset Management Group	Y	Y
WCM Investment Management	Y	V
WEDGE Capital Management	v	Y
Wellington Management Company, LLP	Y	
Wells Capital Management	Y	
Wells Fargo Private Bank		Y
Western Asset Management Company	Y	

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William Blair & Co., Inc.	Υ	Υ